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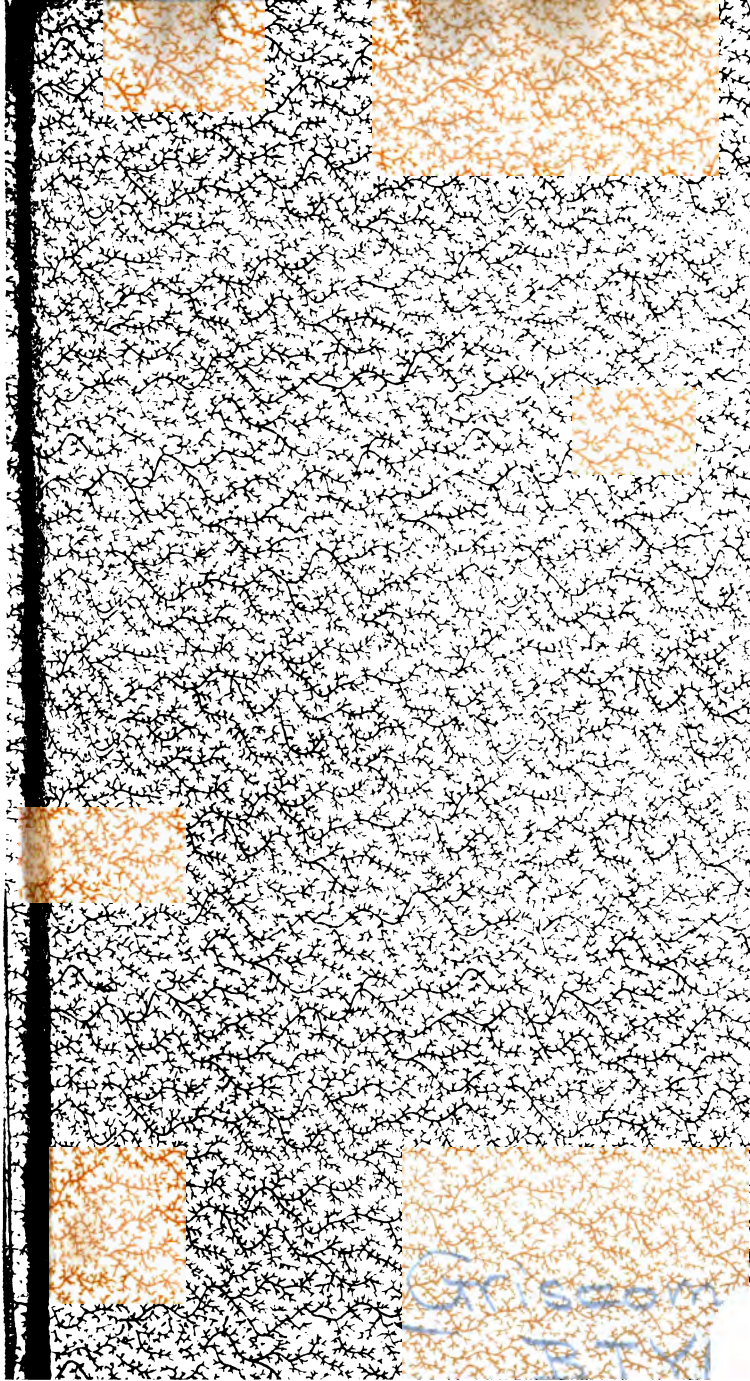


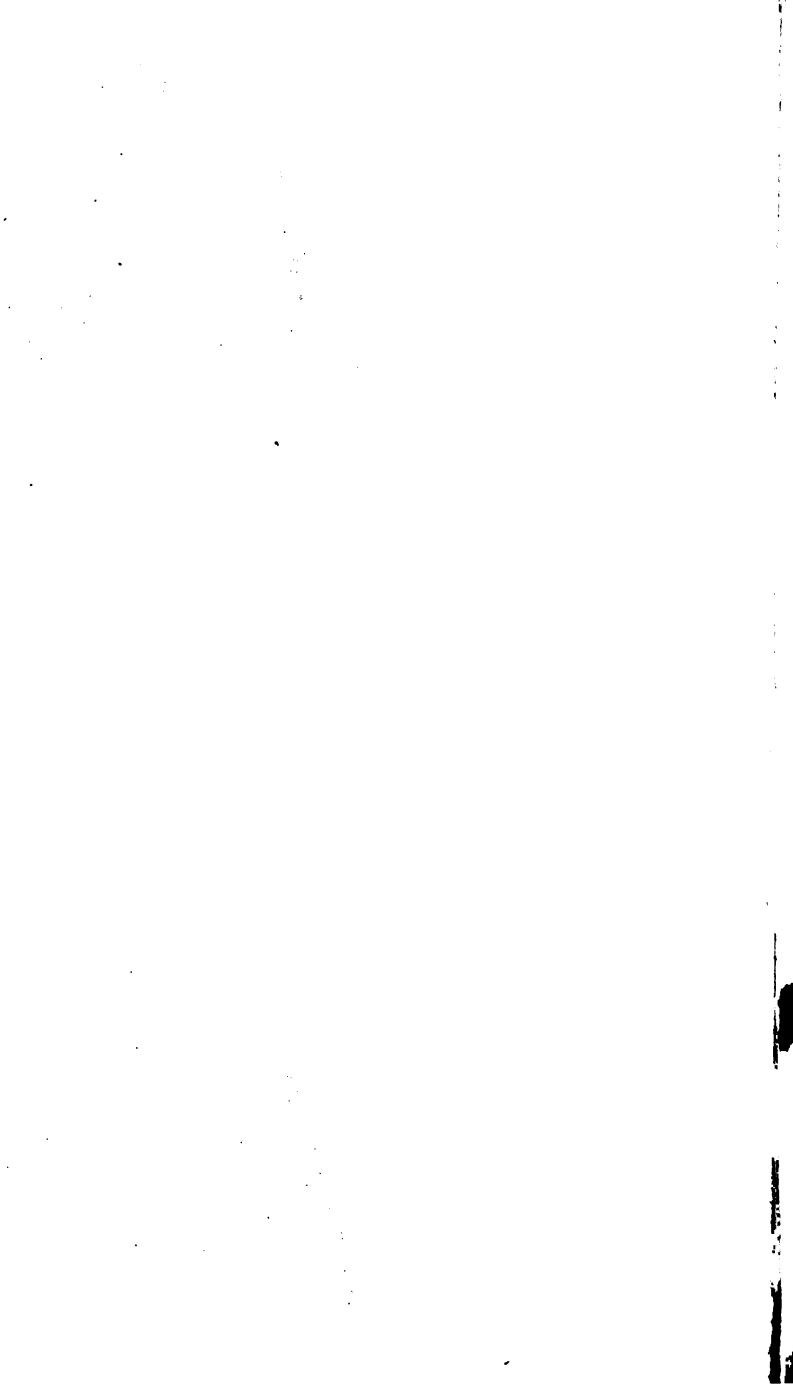
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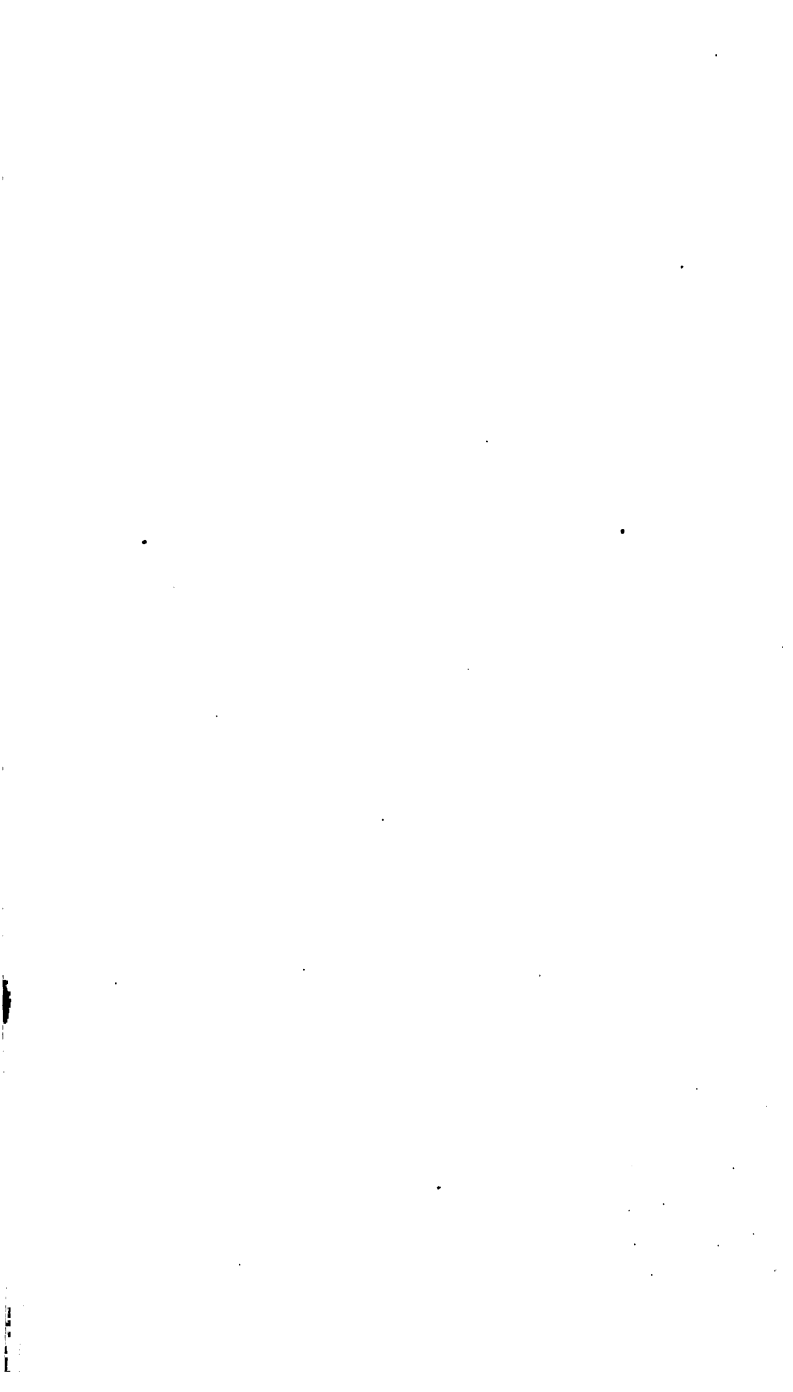
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YEAR IN EUROPE,


COMPRISING

A JOURNAL OF OBSERVATIONS,

IN

ENGLAND, SCOTLAND, IRELAND, FRANCE, SWITZERLAND,
THE NORTH OF ITALY, AND HOLLAND.

In 1818 and 1819.


BY JOHN GRISCOM,

Professor of Chemistry and Natural Philosophy in the New-York Institution; Member
of the Literary and Philosophical Society of New-York, &c.


IN TWO VOLUMES.

VOL. I.


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"A year in Europe, comprising a Journal of Observations in England, Scotland, Ireland, France, Switzerland, the North of Italy, and Holland, in 1818 and 1819. By John Griscom, Professor of Chemistry and Natural Philosophy in the New-York Institution Member, of the Literary and Philosophical Society of New-York, &c. In two Volumes."

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THE first edition of this work having been for some time wholly disposed of, the Author is encouraged to commit it a second time to the press. In this decision he has not been governed so much by the ready sale it has obtained, as by testimonials of approbation, from persons, both at home and abroad, whose authority as writers, travellers, and philanthropists, few would be disposed to contest. The merits of his journal (whatever they may be,) consist, he is fully aware, in fidelity of description, and not in the graces of composition; for in a work of so desultory a character as the diary of a traveller, in which facts rather than speculations have been the chief object of his details, not much room is afforded for indulging the imagination in the luxuries of language. At the suggestion of a number of readers, whose wishes he could not well disregard, the sentences in French have been translated at the bottom of the page; and the names of many individuals, represented in the former impression only by asterisks, have, in the present, been given at length; a liberty which, in the cases alluded to, will not, he trusts, on full consideration, be regarded as a departure from a just perception either of delicacy or correct taste. Various typographical errors, which were overlooked in the first edition have been corrected.

New-York, 12th month (Dec.) 1, 1824.



PREFACE.



THE relations between America and Europe are becoming every day more interesting and important. The unexampled rapidity with which the commerce, agriculture, and arts of the United States are extending and increasing; the extraordinary facilities now given to the social intercourse between the new and the old world; and the unabated spirit of enterprize and industry, which prevails in many parts of Europe; conspire to render these relations a concern of the greatest moment,—as tending, in no inconsiderable degree, to influence the tranquillity and happiness of a large portion of the civilized globe.

Under such circumstances, it must be considered, by persons conversant with human nature, as extremely desirable, that the people on each side of the Atlantic, should become more intimately and perfectly acquainted with each other; for it may, perhaps, be stated as a political, as well as social axiom, that the greater the intimacy, the greater probability of a pacific and cordial union;—that many of the rancorous jealousies and deep rooted prejudices, which are so apt to prevail between nations, as well as sects and neighbourhoods, would soften into kindness, were opportunities afforded of studying the bright as well as the dark sides of each other's character. And it requires but little ingenuity to perceive, that were there between nations a pervading sense of each other's merits, and a just feeling for each other's prosperity, it would be infinitely more difficult for the disaffected to bring about that condition

Things, which is the most disastrous to human improvement, a state of open warfare,—and infinitely more easy to suppress the evil when it did prevail.

From these considerations it will be admitted, that books of travels, when written under the proper qualifications, are among the most useful kinds of literature;—that they furnish the principal means by which distant communities and nations become acquainted with each other's peculiarities, by which the useful arts are extended, and morals and manners, rendered more diffused and impressive.

It will be admitted also, that however beaten the track over which travellers may have passed, it is impossible to exhaust the stores of useful illustration, or to overcharge the picture of national and local representation, as long as truth and feeling guide the hand and qualify the pencil. It can never be said of the describer of nature, and more especially of human nature, as it may of the orator who confines himself to some particular topic, that he has left nothing to be desired. So vast is the field of humanity, and so infinite are the shades which diversify the moral condition of the human race, that it is scarcely possible for two individuals to follow each other in the same precise track of description. Not only do different observers see the same thing in different points of view, but each one has his particular sphere of observation, and will almost unavoidably throw some new light upon the subjects he attempts to elucidate. Hence every person who visits a foreign country will at once perceive, that, how diligent soever he may have been in studying that country through the medium of books,—a continual variety of undescribed peculiarities will claim his attention and that a small part only of the whole has been laid before him.

But notwithstanding these obvious truths, the Author cannot assure himself, that, even by the most reflecting

CONTENTS OF VOL. I.

LETTER I.—Voyage to England	PAGE 13
LETTER II.—LIVERPOOL.—Custom House—blind school—W. Roscoe—Nelson's monument—Liverpool Institution—fund for preventing impositions—society of Friends—extensive commerce—increase of population—Athenæum and Lyceum—botanic garden—gas light—hour of dining—hospitality	24
LETTER III.—Journey to MANCHESTER.—Appearance of the town—manufactures—glazing house—printing factory. ARDWICK.—cutting velvets—J. Dalton—Dr. Henry—counterfeit products—infirmity and lunatic asylum—hotels—public baths—Chetham's hospital—collegiate church—public amusements—population—science and learning—philosophical society—Lancasterian school—Sunday schools—peculiarities in dialect	32
LETTER IV.—Journey to Birmingham.—Litchfield—Dr. Darwin—Uttoxeter—stage company—arrival at BIRMINGHAM—factories—buttons—tea-trays—snuff-boxes—literary institutions—top of the coach—Warwick—coachmen—Blenheim—OXFORD—general appearance—beautiful walks—colleges—libraries—student's dress—immorality—chalk, flint—agriculture—population—Henley—succession of villages—arrival in LONDON	43
LETTER V.—LONDON.—First impressions—yearly meeting of the society of Friends—British and Foreign Bible Society—Lord Teignmouth—Sir Joseph Banks—conversations—Sir Humphrey Davy—House of Commons—Westminster Abbey—court of chancery—speakers in Parliament—W. Wilberforce—Sir S. Romilly—H. Brougham—Lord Castlereagh—Canning, &c.—reporters—luncheons—king's birth day—anniversary of British and Foreign School Society—exhibition of the children—Duke of Sussex—dinner—Benjamin West—his galleries—bazaar in Soho square	51
LETTER VI.—LONDON.—Country seats—Chingford church—prorogation of Parliament—procession—state coach, and other equipages—Seneca Indians—British Museum—its endowment and contents—Royal Academy of painting—West—Trumbull—Alston—Leslie—Newton—annual exhibition—its academicians and lectures—Day's collection—Tottenham, mineralogy and meteorology—Rundle and Bridge—diamonds and jewels—menagerie at Exeter Change—British Gallery in Pall Mall—Bullock's Museum—Westminster gas factory—the Tower and its various contents—Borough road school—Joseph Lancaster—charity children in St. Paul's Cathedral—Society of Arts, Adelphi—panorama of	

Athens—city election at Guildhall—British freedom—West and East India docks—Isle of Dogs—Surry Institution—So-werby's Museum—GREENWICH—the hospital for invalids—Royal Observatory—J. Pond—the apparatus—large camera obscura—deaf and dumb school—Dr. Watson—school for the blind—Philanthropic Society its buildings and operations—Chelsea hospital—Chantrey, and his elegant sculpture—Linwood collection of pictures in worsted—London institution—dinner of the Royal Society at Greenwich—Bond-street—Dubourg's models—P. Colquhoun—Dr. Fothergill's country seat—Elizabeth Fry—chemical factory at Stratford—Coade and Sealy's artificial marble—printing by steam—British and Foreign School Society—Duke of Sussex—visit to Newgate with Elizabeth Fry—Westminster election—hackney coaches—London streets—pavements—female degradation—splendour of the shops—supply of water—drainage—population of London—markets—meat shops—public squares—royal parks	65
LETTER VII.—Departure from London.—Weather—Hounslow—large wagons—Slough—Sir W. Herschell—large telescope—conversation—Windsor Castle—the King—furniture—Windsor park—Eton college—Wiltshire—White-horse hill—Bow wood—barrows. BATH.—population—buildings—pump room—institutions—sedan chairs—good roads—broad wheels. BRISTOL.—Redcliff church—cathedral—charities of Bristol—thatched cottage—fine views—hot wells—R. Reynolds—Dr. Pritchard—commerce—river Avon—improvements in navigation—Clifton	107
LETTER VIII.—BARLEY-WOOD COTTAGE.— <i>Hannah More</i> —her conversation, &c.—Wrighton—Langford inn—provincial dialect of Somersetshire—Bridgwater—its antiquity—Taunton—cob cottages—potwalloper—Honiton. EXETER—cathedral—gaol and bridewell—Haldon hill—fine view—Totness—Ivy-Bridge—Plymouth—large ships—coat—Leskeard—emigration to America—Cornwall. TRURO.—Carpet manufactory—smelting of tin—tin ore—revenue—Burncoose	122
LETTER IX.—CORNWALL.—MINING—united mines—mining captains—raising the ore—different ores—veins or loads—underlie—depth of mines—mine under the sea—products of mines—profit and loss—structure of mines—steam engines—adits—support of the sides and roof—labour of mining—morality of the miners—Scorrier—mineralogical cabinet—geology of Cornwall—antiquity of the tin mines—statistics—quantity of metal and value of the mines. FALMOUTH.—R. W. Fox—Truro philosophical society—Redruth—Gram-pound—St. Austel—Polgooth—antiquities of Cornwall—manners. PLYMOUTH dock yard—market—varieties of fish—Mount Edgcumbe—Breakwater—smuggling—Dart-moor. EXETER—mine of Manganese—literary and philosophical institution—hospital—insane hospital—antiquity—agriculture of Devon—cider—Honiton—Mere—FORTHILL—W. Beckford. SALISBURY—cathedral. SOUTHAMPTON	133.

LETTER X.—SOUTHAMPTON. —Canute's lesson of humility— passage to Cowes—Netley Abbey—Cowes—Newport—Ca- risbrook castle—southern coast of the Isle of Wight—pictu- resque scenery—Niton—small church—seat of Earl Dysart —Shanklin—Brading—Ryde. PORTSMOUTH —dock yard— dry dock—block machinery—Brunel—circular saws— <i>Chi- chester</i> —Collins' monument—Gothic cross—ingenious cha- rity—Arundel—Worthing. BRIGHTON —Population—sea- bathing—shampooing—use of donkey—packets for France	152
LETTER XI.—Passage to DIEPPE. —Alderman Wood—French sailors and gens-d'armes—examination at custom house— beggars—church—Normandy cap—female barber—journey to ROUEN —suspended lamps—cathedral of Rouen—convent or nunnery—table d'hôte—Mount St. Catherine—bridge of boats—French diligence—route to Paris—chalk forma- tion—vineyards—Marly water works—attachment to Bo- naparte—preference to Americans—entrance of Paris— Sabbath evening—Elysian fields—Meurice's hotel—garden of Thuilleries—female delicacy—museum of Louvre—statu- ary—picture gallery—pont des arts—ascent of Madame Blanchard—fiacres and cabriolets—Abbé Gaultier—Count l'Asteyrie—Garden of Plants—Dr. Gall's lectures—village of St. Deny's—Montmorency—Montmartre—attack of the Allies on Paris—telegraph—Institute, its sittings—Luxem- burg—paintings and garden—meeting with Friends—plain dress—Adet—Fourcroy's sisters—Abbé Haüy—his cabinet —ride to St. Cloud—the palace and garden—Versailles— palace and garden—play of the fountains—the water works —Grand and Petit Trianon—Vauquelin—fête of St. Louis— vast concourse—singular amusements—balloon—illumina- tions—Bishop Gregoire—Gymnastic school—school of mines —museum of French monuments—fountain of the elephant —Charles' philosophical apparatus—Cemetery of Père la Chaise—Institut Academique—Frères de la religion Chre- tienne—Professor Berzelius—J. Owen—Gay Lussac—caf- fes and restaurateurs—river Seine—sale of books—carri- catures—Boulevards—various shows—crowded streets— manner of keeping the Sabbath—state of religion and morals	168
LETTER XII.—Departure from Paris—Essonne. FONTAINE- BLEAU —the forest—gardens and palace—Nemours—Mont- targis—the Loire—Cosne—cannon foundry—female influ- ence—La Charite—Nevers—mendicity—Moulins—fine country—wooden shoes—nuts—agriculture—use of oxen— St. Gerand—Roanne—mode of spinning in the fields—Mount Tarare—Puy de Dome—Tarare extortion at inns—mine of Chessy—La Tour—arrival at LYONS —Rhône and Saône— amusements—museum—La Fourvieres—hospital Antiquailles —Notre Dame de Fourvieres—chapel of St. Just—Catholic procession—silk manufactory—metropolitan church—curi- ous clock—a dinner—streets and appearance of Lyons—ancient mosaic—La Charite—Foundling hospital—general hospital—college of Lyons—ancient aqueduct—republican cruelties—road to Geneva—Nantua—opinions respecting	

Bonaparte—Perte du Rhone. GENEVA.—Moulinier—sec- tarian divisions—table d'hôte—Rans de Vache—Professor Pictet—Dr. Marcet	204
LETTER XIII.—GENEVA.—Professor de Candolle—Mad. Ver- net—jaunt to Chamouny—Savoy—Bonneville—valley of the Arve—sublime scenery—water falls—St. Martin—Salenche —evening, and distant view of Mount Blanc—Char-a-Banc —St. Gervais—Servoz—Roman chateau—Chamouny—Gla- cier de Bosson—tenderness of the guides—passage of the ice—the Priuré—hotels—collections of minerals and plants —ascent to La Flegere—Panoramic view of Mount Blanc —Avalanches—Glaciere de Bois—icy cavern—disaster— Mount Blanc covered with ice—simplicity of manners— natural history of Mount Blanc—return to Geneva—presi- dent Vernet and family—professor Prevost—new literary institution—professor Jurine and his cabinet—academy of painting—models of the Alps—Mrs. Marcet—Alderman Wood—evening party at professor Pictet's—credulity—arri- val of two English companions	232
LETTER XIV.—GENEVA.—Insane asylum—prison—pauper- ism—school of mutual instruction—departure—fine scenery on the lake—Coppet—Madame de Staël—Rolle—Morges. LAUSANNE.—Benevolent English lady—prison—support of the poor—education, savings banks—road to Vevey—supe- rior vineyards—Vevey—excursion on the lake—castle Chil- lon—numerous clocks—dress of the peasants—agriculture —Bulle—convent of capuchins, uncleanly and idle— Gruyere. FRIBURG.—Chanoine Fontaine—interesting conversation—Pere Girard—museum of paintings, &c.— education—hospital of Friburg—cretins—Jesuits' College —opposition to Pere Girard—situation of Friburg—canton of Berne—curious costume. BERNE.—Female exercises —Dr. Wytttenbach—library and museum—Haller—hospi- tal of Berne—road to Hofwyl—establishment of Emmanuel de Fellenberg—Vehrly—importance of such a system of in- struction—count de Villevielle—village of Riechenbach— beauties of Berne—Arburg—lake Bienne and J. J. Rosseau —merriment of the vintage—manner of collecting the grapes —St. Blaise—Neufchatel—secretary Montmollin—captain Courant—hospital—wine press—public spirited citizens— mercenary soldiers—ascent of the Jura—extensive watch factory—Chaux-de-fond—trade in watches—Locle—M. Houriet—charity school—aqueduct cut through a mountain —descent of the Jura—Yverdun—Pestalozzi and his institu- tion; his character—Lausanne—return to Geneva—Si- monde de Sismondi	250
LETTER XV.—GENEVA.—Public voitures—pledges of a bar- gain, or <i>arrhes</i> —laws and government of Switzerland—pro- fessor Pictet—bibliothèque universel—beauties of Geneva— mechanical ingenuity—departure for Milan—Thonon—Ri- paille—Vivian—St. Gingoulph—canton of Lavalais—St. Maurice—a hermitage—credulity—murder of the Theban legion—cascade of the Pissevache—Martigny—great devas-	

tation by a sudden flood—Goitre. SIEN.—Hospital—com- panions in the voiture—Glis—church and charnel-house— Brieg—ascent of the Simplon—Napoleon route—Geology —village of Simplon—galleries—excellence of the road— Domo D'Ossola—Catholic superstition—Fariola—Lake Maggiore—Borromean islands—Isola Bella—colossal statue of Borromeus—Sesto—Gallerate—church and ceremony at Rho—arrival at Milan—superb view from the cathedral	294
LETTER XVI.—MILAN.—The great hospital—surgeon Moriji —the foundling hospital—the grand Duomo, its dimensions —statuary—tomb of St. Charles—his character—Monti, the poet—the naumachia—the echo—triumphal arch—picture of the Lord's Supper—the Zecca, or mint—count Moscati —the Brera—astronomical observatory—library—Acerbi— the prison—school of mines—hospital of Trivulzi—Ambro- sian library—Angelo Mai, his discoveries—Petrarch's copy of Virgil—dress of the Milanese—mendicity—population— departure for Pavia—canal—church of Certusa—Pavia— the university, professors, and course of instruction—the hospital—towers—river Ticino—the Po—stage company— a Cicisbeo—Voghère—out-door work of women—poor pea- santry—plain of Marengo—Tortona—cultivation—fine ef- fect of the Italian language—morals—passage of the Appe- nines—Votaggio—the Bochetta—Campomarone—fast day —a quarrel—arrival at Genoa—beauty of the country and prospect	317
LETTER XVII.—GENOA.—The weather—English family—a steam-boat—the university—its classes—reading room— light house—palace of Doria—the great hospital—Maniacs —police of Genoa—church of St. Andrews—San Stephano— a dinner—monks and priests—small-pox—streets of Genoa —schools for deaf and dumb—palaces—Albergo de Poveri— statue of Michael Angelo—climate of Genoa—markets— arbutus unedo—departure for Marseilles in a steam-boat—the crew—beautiful scenery of the coast—curiosity excited— embarrassment—saline d'hyere—the sabbath—isles d'hyeres —orangeries—fig-trees—entrance of Marseilles—surprise at seeing a steam-boat	342

A YEAR IN EUROPE.



LETTER I.

Ship Pacific, at sea, 4th month (April) 7th, 1818.

MY DEAR ***** AND *****,

By the pilot, who left us about 10 A. M. yesterday, I transmitted a short account of our progress from the time of leaving you, on the preceding afternoon. We had just finished our breakfast, and were beginning to experience that agitation of the ship, which generally proves so distressing to novices at sea. We took our dinner, however, at 4 o'clock, (the regular hour on board our ship,) and remained nearly all the afternoon on deck.

The wind was easterly, but not so much ahead as to prevent us from proceeding directly on our track. Sandy-Hook, and the adjacent shores of New-Jersey and Long Island, were gradually vanishing from the sight; but the high land of Navesink still continued within our horizon when night closed upon us. The wind, you may recollect, had blown strongly from the east for several days before our departure. The ocean had been wrought by it into an irregular, broken kind of movement, the effects of which, upon my system, I at length found it impossible to resist. I sought repose in my state-room at an early hour, and passed a tolerably comfortable night.

Upon coming on deck this morning, I found that we were fairly launched on the rotund surface of the mighty deep. The wind had veered so much to the northward, as to enable us to lay our course, and to advance at a rapid rate. Several vessels left the Hook nearly at the same time with ourselves; one of them was bound to the same port; but the superior sailing of our ship, especially during a steady and strong breeze, was soon observable.

The painful and most distressing sensation of sea-sickness continued throughout this day, so as to deprive me of all real enjoyment of the majestic scenery of sky and ocean. The night was to me restless, feverish, and trying in the extreme.

8th. I was confined to my birth most of the day. The wind was strong, the weather cloudy, and the motion of the ship very great; pitching sometimes with tremendous force downward, as if plunging directly into the bosom of a mountain wave, and then darting upward with the celerity of a bird, and rearing her bowsprit to the skies. The force of habit upon the body is wonderful. So novel were these sensations to me, and so distressing to my whole frame, that, as I lay in my birth to-day, under the effect of constant and irremediable nausea, I felt disposed to condemn commerce altogether, as a revolt against nature and Providence, and almost to wish I could have it in my power, on getting ashore, to put a stop to navigation, and to confine people on terra firma, where they might enjoy their appetites. But while I was thus harassed and enfeebled by a most depressing sickness, our sailors were not only alert on the deck, but, when occasion required it, even when the ship was most violently tossed, would run to the topmast, spring out upon the yards, reef or unreef, without experiencing any emotion of the stomach, except, perhaps, that which sharpens the desire for food and drink.

9th. The wind continues fair, and our motion rapid; but the weather still cloudy. I was unable to enjoy the society of my fellow-passengers, from continued and unabated sickness. I spent much of the day on deck, sitting wrapped in a thick coat, and fur cap, indulging the almost forlorn hope that things would mend.

10th. Still proceeding with a fine breeze. A better night; though not much relief has been obtained from the still predominating distress of the stomach. Its digestive power seems to be lost; and whatever is taken, appears to ferment, filling the mouth with a taste like that of impure vinegar.

This afternoon we spoke a French brig from Havre de Grace, *sixty-one* days out, bound to New-York. This was the first incident of the kind, and it served in some measure to relieve the monotony of sick days and nights.

11th. The wind not quite so high as it has been. The ship has rather less motion; but food has little, or no relish. We have been floating for two or three days in the gulf-stream, in which the temperature of the water, as we have proved by trial, is 30° higher than it is just beyond its limits. That such a vast current of water should perpetu-

ally flow from the gulf of Mexico, and spread itself so far toward the north and east, appears accountable only on the position, that the trade winds are as constantly driving into that immense basin a body of warm water from the equatorial region of the Atlantic ; which, there accumulating, finds an outlet round Cape Florida, and sets to the northward until it mixes with the water of the Arctic sea. The warmth of the air over this stream, corresponds with that of the water. Our thermometer has been at 70°, a heat which increases the unpleasant effluvium of the ship, relaxes the system, and retards recovery.

12th. We had a fierce gale of wind in the night, accompanied with vivid lightning and heavy rain. The sea broke over the ship with prodigious force, and appeared as a continued shower, or rather storm, of fire ; as if sparks and burning cinders, from a neighbouring chimney or house on fire, had blown directly across the deck. This was owing to that quality in the water of the sea called *phosphorescence* ; which, it is known, is produced by various marine insects, of different sizes and species, affording light of various degrees of intensity and colour. In the midst of the storm, a phenomenon occurred, which drew the attention of all on deck ; and which is so seldom seen, that our captain does not distinctly remember that he had ever before fairly witnessed it, though he has been a seaman more than twenty years. This was the appearance of balls of fire, resting on the top of one of the masts, and on the ends of one or two of the yards. The sailors call them *corposants*.* They exploded, shortly after their first appearance, with a most vivid splendour. This is doubtless an electrical effect, analogous to what is produced in a small way, by fixing points to the prime conductor of a machine well excited ; or, by presenting a pointed body to the conductor, when the machine is at work in a dark room. On such occasions as this, it demonstrates a highly electrical condition of the atmosphere.

Notwithstanding the violence of the storm and wind, the motion of the ship was not so much increased as I should have expected ; but this was owing to her being kept steadily before the wind, which happened to come from a quarter favourable to our direct progress. All the sails were taken in before the storm arrived at its height ; but not until one of them, (an old sail,) had been split to pieces.

* *Corpo Santo*. Ital. A holy body ; from their being formerly considered as an omen of a prosperous voyage.

Being myself too ill and enfeebled to leave my birth, to witness the sublime appearances of this storm, I am indebted to my very intelligent friend and fellow passenger, Dr. Fearn, who remained on deck during the whole of it, for an account of the principal phenomena. I was awake while it lasted: but felt, as it regards personal danger, a calmness and confidence for which I desire to be thankful.

The storm blew over, and the sails were again set before sun rise. This being the first day of the week, and the weather having cleared up pleasantly, it was proposed to the passengers assembled on the deck, that one should read aloud for the benefit of the rest. This being readily assented to, the last of Dr. Chalmer's discourses was read by a Scotch gentleman, who informed us he was present when they were delivered. We were proceeding to read a recent sermon by the same author, when a man at the mast-head cried out, "An island of ice on the lee bow." From the great change we had experienced in the temperature of the air and water, we had reason to expect the existence of floating ice at no great distance; and a good look out was maintained for it. Mounted on the windlass, I could distinctly see this island, like a white mass in the horizon. In a short time we approached it within a few miles. Its apparent height was forty or fifty feet, and its base on the water, perhaps three hundred feet in length. It resembled a beautiful hill or prominence, covered with snow. Its sides appeared to be perpendicular, so that the imagination could easily transform it into a castle of white marble, with its towers and turrets on the summit. It appeared, as far as we could judge by the eye, to be immoveable, but it was no doubt subject to the agitation of the waves. The breaking of the sea against it, produced a spray, which rose to a great height, and exhibited a splendid appearance. In the course of a few hours, five or six other masses appeared, some of which we approached, much nearer than the first. There was something of the terrific mixed with the grand, in the emotion produced by the sight of these prodigious piles of moving ice, the greater portion of which must lie beneath the surface and be out of sight. Several vessels have been destroyed by running against them in the night. As the moon shone till midnight, and the wind was not high, the captain thought it safe to keep on his course, but under different circumstances, he would have taken in sail and lain to. If proper attention were always paid by navigators to

the indications of the thermometer, it is probable that all danger from floating ice, at least in the passage between Europe and America, would be entirely avoided. The diminution of temperature, both of the sea and air, in approaching those large masses, affords a sufficient warning of their proximity.

About 2 o'clock to-day we met and spoke the ship *Jane* of Philadelphia, out sixteen days from Liverpool. I do not know that I was ever more surprised at my own involuntary emotions, than at the moment when the name and destination of this ship were announced to us, from the trumpet of her captain. Cut off, as we were, by a waste of waters, from the social endearments of country and home, and all the tender sympathies of friends and children; wandering in a solitary and trackless way, where all around us was an utter blank in relation to human beings; and with sensibilities unusually excited by the novelty of our situation, and uncertain of the extent of its duration—to meet with others in the same circumstances, and they our countrymen! I can only appeal to those whom experience has instructed, whether the sympathetic tear, which I found it almost impossible to restrain, was nature or mere weakness. The secret hope too, that you would hear of us by this ship, was not without its effect, in the impressiveness of the moment.

13th. The wind has been very high most of the day, but directly in our favour. At 12 o'clock we had made, by our log, 250 miles in the last 24 hours. The sea has been very rough, and the pitching and tossing of our frail vehicle excessively great; but I have so far recruited as to enjoy the magnificence of this grand conflict of winds and waters. We have but one female in the cabin, and she, like myself, was never at sea before. Her illness has been of longer continuance than mine, as she is not yet able to sit up. There are five women in the steerage, one with two children, and another with three, two of the latter being twins about seven months old. This poor woman left Europe with a husband, whom she had married against the advice of her parents, to try their fortunes in America. Under pretence of seeking employment in Canada, he left her in New-York, a short time before the birth of her twin children, and, associating himself with worthless and dissolute company, abandoned her to the world. She is returning.

to her parents ; and, as if a life of trouble and hardship were a guarantee against temporary and incidental evils, she takes care of her children, and appears to be less affected with the confinement and agitation of the ship, than many of the other passengers.

14th. We have been at sea eight days ; and, according to our reckoning, we have accomplished more than half our journey ! The variety of the table begins to have its attractions, and we have an abundant supply of live fowl and other fresh provisions. One of our hogs one day jumped out of his pen, (the longboat, fixed in the middle of the deck, serving both as a pigsty and sheepfold,) and ran about the deck. One of the men endeavoured to drive him back ; but, with blind perverseness, he aimed for a port hole, and plunged into the sea. The poor animal continued swimming on the tossing waves as long as we could see him.

16th. We were accosted this morning by a French brig from Cherbourg, and requested to wait ten minutes. The sails were backed, and the French captain came on board in his boat. His object was to send two letters to France ; to which we had no objection. He was bound to the banks of Newfoundland after fish.

17th and 18th. The wind for these last two days has been ahead, and has blown with much force. Time would pass tediously, but for the inexhaustible entertainment which books afford.

19th. In the course of this forenoon, the captain on deck cried out to the passengers below—"Fish! thousands of fish !" As I had not seen even the gleam of a fish during the passage, I hastened on deck. It was a shoal of porpoises. The sea ran in lofty billows, and, as far as the eye could distinguish objects, they were seen sporting on the tops of the waves, and chasing one another as playfully as kittens on the hearth. They played thickly around the ship. Their glossy brown skins, (appearing green just below the surface of the sea,) their graceful and rapid movements, and their great numbers, rendered the sight truly pleasing. They were, at a medium, about 5 feet long. It has rained most of the day, the weather is cold, and the tossing of the ship very great. We are steering in the direction of the western islands, rather than for England.

20th and 21st. Weather and winds still unfavourable.

The confinement even of a dungeon might be endured, if the night could be uniformly spent in refreshing sleep. But how can a person be expected to sleep, when constantly rocked in a great cradle, the top of which sweeps over one third of a circle? Wakeful in one's birth at the midnight hour; when nothing is heard but the raging of the storm above; the creaking of the masts and joints of the ship, and the hollow groaning of the surge as it dashes and rolls along the sides within a few inches of the pillow on which one's head reposes—there is a solemnity in this which is not merely poetical. It would never fail to awe the boldest mind into an humble sense of human frailty, and of the benignity of that Providence, which, at such an hour, supports and preserves him, had reason and feeling their due empire in the soul.

22d. No material alteration in the winds and weather. Had the gales continued with which we were favoured during the first week, we should doubtless have been in sight of the green fields of Erin before now. But with our present winds, another week, and perhaps another, must elapse before we hail the sight of land.

23d and 24th. It is almost impossible to remain on deck on account of rain, and the violent agitation of our vessel. What sympathy is not due to the poor sailors! Wet or dry, through storm and tempest, they must be at their post, at least one half of them at a time, and occasionally the whole. The very great exposure which they have to sustain, and the absolute necessity of their being on the alert, ready to ascend to the topmast, or to run out upon the rigging to the extremity of the yards, let the ship be pitching or rolling ever so furiously; make it necessary that they should be kept in good spirits: hence a resort to the stimulus of *grog* is conceived to be requisite. They have their regular allowance granted them by the captain, beyond which they cannot go while on board the ship: but is it a matter of surprise that so many sea-faring men should become addicted to strong drink and confirmed in habits of intemperance? It is really a melancholy consideration, that, of the thousands of this class, that devote their lives to so arduous and important a service, there should be so small a proportion that preserve a character of moral respectability. I speak of common sailors. The number I fear is very small, who save from their wages a sufficient sum to enable them to

spend much time on shore, in a situation of comfort and improvement, or to secure a decent competency in sickness and declining age. The demoralizing tendency of a sailor's life is truly to be deplored. That they who occupy the most exposed, the most toilsome and dangerous situation, in the wide range of human pursuits, and who have therefore the greatest reason to recognise and invoke the protection of an overruling Providence, should be in effect the most regardless of that Providence, and by the immorality of their lives, so generally bring upon themselves the reproach and neglect of the world, is a consideration painful to humanity. There are two causes which powerfully operate in this process of degradation;—the free indulgence in intoxicating liquors, and the habitual use of bad language. Is it not quite impossible, that the sentiment of veneration for the Deity should be cherished by him, who perpetually associates the name of his Maker with the most frivolous, as well as the most passionate impulses of the mind? The practice of swearing, I cannot but consider as *inevitably demoralizing*. Greatly is it to be desired, that the benevolent spirit of improvement, which is so conspicuous a feature of the present times, should be directed to this class of the community. If a moral debt be due from one part of society to another, I cannot but believe that they who enjoy the blessings of ease and knowledge, and a due sense of the benefits of religious cultivation, ought to consider themselves bound, as far as practicable, to alleviate the condition of sailors, more especially in relation to their religious improvement. It is a great mistake to suppose that a ship cannot be conducted and governed without an habitual violation of the third commandment. Experience has amply proved the reverse. Many of the whale ships which annually sail from Nantucket, are commanded by members of the society of Friends, who will suffer no harsh or vulgar language to be used. Captain Allen, who was gone thirty-two months on one of these perilous voyages, stated on his return that he had not heard an oath on board of his ship. Marine Bible Societies may do much good; but associations for conferring the advantages of a virtuous and enlightened education on young men destined to become mates and captains of ships, would, in my opinion, be productive of the greatest benefits.

25th and 26th. The wind still blows heavily from the

same opposing quarter, with frequent squalls of rain. I have tried to console myself with the reflection that, though adverse to us, this wind is as much in favour of our New-York friends as against them. Our captain thinks the *Amity* has arrived by this time at New-York. How frequently does it happen in the voyage of life, that the same course of events which seems to thwart our purposes, promotes the prosperity of others, and advances the general good. This reflection ought to soften the edge of our complaining.

27th. We have had a blustering night; very high wind, accompanied with hail. The motion of the ship more violent than ever. On ascending the deck, before breakfast, I found the wind had shifted to the northward, and that we were steering pretty directly for the Channel; so that we indulge the hope of getting into soundings to-morrow. The sea, "curling its monstrous waves" nearly half mast high, and splashing across the ship at mid-decks, involves, in the comforts of a cold salt water shower-bath, all who happen to be in that part of the vessel.

28th. After sailing for weeks under reefed mainsail and topsail, and frequently no canvass at all at the mizzen-mast, and the wind blowing from England, it was cheering to learn this morning, that we were going directly forward with a fair wind, and with top-gallant and studding sails spread to the breeze. The sun sometimes appeared, and gladdened us with his beams. I do not think he has risen once without clouds during the passage. At 1 p. m. sounded, and struck the bottom at 85 fathoms!

29th. A fair wind all night—Weather hazy, with showers of rain. 10 a. m.—No sign of land, though by our reckoning we must have passed Cork: but the weather is too misty to see far ahead—55 fathoms of water this morning. Noon.—Spoke a small sloop bound to Waterford: they tell us we are but a few miles from the Irish coast—Very misty with showers. 1 p. m.—The mountains of Ireland are now in full view through the haze.

Our reckoning has been surprisingly correct, considering that we have been obliged to depend almost entirely on the log. There have been very few opportunities for observation.

Half past 2.—Came up with and spoke a ship from New-York, bound to Dublin, which left her port as the *Pacific* entered it. The captain spoke her at Sandy-Hook, going

out as he was going in. In order to clear the rocks on the Irish coast, we have been obliged to steer out into the Channel, and have lost sight of the land. Half past 5.—Abreast of the Saltees, large masses of rock, like islands, several hundred feet in length, at some distance from the shore. We passed within gunshot of a rock, which appeared just above the surface, like a large porpoise. The dashing of the waves against it, raised a prodigious spray discernible for miles. It is extremely dangerous, but it is well laid down in the charts. 7 o'clock.—In sight of the lighthouse on the Tuscar rock. This rock is about 5 miles from Carnare Point, on the Irish coast, and opposite St. David's-Head in Wales. The Channel is here about 40 miles wide.

30th. The mountains of Wales were distinctly seen skirting our eastern horizon this morning, while the high hills of Wicklow, in Ireland, were still more conspicuous in the west.

9 A. M.—We are now between Dublin and Holyhead, the two principal places between which the packets ply to and from Ireland. A land bird, fatigued in its passage, has just alighted on the deck. Considering the weather, we have really made an extraordinary passage; twenty-two days from land to land, and twenty-five on board the ship. There have been nine passengers in the cabin. My young friend and room-mate, J. B. Smith, has, like myself, fully shared in the distresses incident to a first sea voyage; but has borne up under their depressing effects with much patience and firmness. Dr. F. has proved an interesting companion. We have an English captain returning with his wife from Canada. He is good-natured, but savours too strongly of the camp. F. a Scotch passenger, is an intelligent man, and evinces in his deportment the influence of a Scotch education. G. a young Englishman from Canada, is a modest and decent young man. The other two are Irishmen, one a resident of Pittsburgh Pennsylvania, the other a traveller, trader, or *Je ne sais quoi*.

9 P. M.—The wind has been so much ahead and so strong, we have done little more than double the island of Anglesea. The day closes with mist and rain.

5th month 1st. 8 A. M.—Heavy rain in the night, and still cloudy. No land in sight, but the wind has changed in our favour, and we are going on briskly. We have just taken a pilot on board, and as he is the first person we have seen

immediately from the "land of promise," he has to undergo the keen inspection of our sea-beaten company, and to submit to a multitude of questions. The Courier is to sail this day, and we hope to meet her and forward our letters. The tide will not serve to pass up the river Mersey, till toward dark. As the hour of debarkation approaches, our mental excitement increases. The land we are to set our feet upon,—is it different from our own in appearance? Do the customs and manners of the inhabitants resemble those of our own country? Shall we meet with a kind or a cool reception? While curiosity was thus excited, we could not but feel the impulse of joy and gladness in the anticipation of being so soon relieved from the dull monotony of the sea, and confinement of the ship, and left to the free exercise of our limbs, in a country where variety and novelty would conspire to interest us.

12 o'clock.—The clouds are dispersed, and the sun shines as it does in America. The scenery along the coast is finely variegated. Penmanmaur exhibits its bold and rugged front fully to our view, the snow covering its top and lodging in numerous hollows on its sides. Cultivation has spread its charms to the very summits of the hills. Houses thickly scattered, hedges, fences, and green fields, are distinctly seen, giving us within the same grasp of the eye, the dreariness of winter and the smiling verdure of spring. The mouth of the river Dee is before us. We are under good way, expecting to reach the town about 8 or 9 o'clock. 5 P. M.—We are informed by a pilot-boat, that the Courier tried to get out, but was arrested in the river by the tide. We shall probably soon meet her; and therefore I can add but little more. We are going in with the ship — of Philadelphia, after a passage of forty-six days; nearly double the time that we have been out. We have been remarkably favoured by that hand which guides the movements of the winds and waters; and while the Atlantic rolls between us, I desire that the feelings of sincere gratitude may pervade my bosom.

LETTER II.

Liverpool, 5th month (May) 8th, 1818.

MY DEAR ***** AND *****,

OUR arrival at this port, on the 1st, seemed to be welcomed by vernal smiles and a serene sky. The mild gleamings of a May-day evening, floated around us, as we doubled the *rock* and ascended the Mersey. The captain of the *Courier* boarded us in his boat, took our letters, and shortly after hoisted his sails and pursued his voyage. We anchored abreast of the town before it was dark. Ten or a dozen large windmills in motion, and the movement of a number of sloops, or lighters, with large *red* sails, struck us as features of peculiarity. We were boarded by several boats, in which were the head servants of some of the inns, who presented us with cards, and solicited our company. The captain took us ashore in his boat, and abandoned us to the use of our legs on the soil of old England. But to walk with *rectitude* in our new situation, was an affair of greater difficulty than we had anticipated. So habituated were we to the vacillating movement of the ship, we could hardly avoid thinking that the ground ought to move up and down and sideways, as we placed our feet upon it. We reeled as if intoxicated with wine. Our progress was soon stopped by a large canal which connects one dock with another. The bridge was hoisted to admit the passage of a vessel; but the officer, with singular politeness, had it lowered for our accommodation, and immediately raised it again. We took lodgings at the Star and Garter, in Paradise-street, an inn, which, though not the most fashionable, was recommended to us as inferior to none in comfort.*

In vain, during the first night, did we court the favours of Morpheus. The watchman called hour after hour, till he sounded *three*, and then it was broad daylight. The rest of the passengers were quartered in the same house, and we found, upon mutual inquiry in the morning, that not one of us had slept a wink the whole night. Like children, it will take us some time to get used to the absence of our cradle.

Every American who has never before been in Europe,

* The *Waterloo* is now the best inn in Liverpool, and inferior to few in England.

must be struck, on landing at Liverpool, with its sombre streets, its dark looking houses, its smoky atmosphere—in short, with its great inferiority, in point of pleasantness, to most of our seaport towns. These repulsive sensations by degrees subside, and entirely lose their influence, as the society, the institutions, the public improvements, the wealth, and the taste of some parts of the town, become known. My letters introduced me to C. B. & Co. and R. H. & Co. whose houses are among the first, in commercial influence and respectability, in this place; the wealth and trade of which are inferior, I believe, to none in the kingdom, except the metropolis. Business is conducted here, by some of the merchants, on a scale which, with us, would be called gigantic. C. B. & Co. have about forty persons regularly attached to the counting-room, and ten or a dozen more engaged in out-door work. Sometimes the concerns of the house require one or two hundred men to be employed about the ships and docks. In the second story, they appropriate a room to the purpose of treating their friends occasionally to a good dinner, (though there is no one that sleeps in the house,) and they do it very genteelly. It gave me pleasure to be introduced, the next day after my arrival, to B. R****, the son of our venerable New-Bedford friend, who was accidentally here. He has been long settled in England, and is well known in the higher circles of society. His manners possess that frankness and kindness which characterize the family, with the ease and polish that result from an acquaintance with the world. He accompanied me to the custom-house, where I was on the point of being subjected to much difficulty and expense. My friends had furnished me with a good stock of letters, mostly introductions, and many of them sealed. These the officer seized with the avidity of a harpy, listening to no remonstrance, and informing me, that I should have £5 to pay for every sealed letter. I followed him into the custom-house, quite indisposed to yield to his demands, or to give up my letters. After a long expostulation, he resigned to me those that happened to have my name on the outside, and carried the others to the post-office. Thither we followed him, and, on explaining the case to the postmaster, he kindly restored to me all those that I assured him were of consequence to me personally, and let the others go into the mail. One of the clerks of R. H. & Co. who assisted me

in obtaining my clearances, said he had never known the officers so severe in their scrutiny as on this occasion ; but my friend R****, who is intimately acquainted with the collector, explained the mystery. An inspector had just arrived here from London, to inquire into the ship accounts of this town, and had found that one of the officers was a defaulter to a great amount, and that a considerable number of ships were altogether unaccounted for by his register. The officer would no doubt be displaced and prosecuted for the deficiency. This had produced a great stir among them, and fully explained the rigour with which our trunks were examined. Having got through this first and unpleasant part of a foreigner's concern, B. R***, accompanied my two shipmates, (J. B. S. and Dr. F.) and myself to the asylum for the blind; and we were conducted through the different apartments of that interesting charity. About one hundred pupils, or patients, are here fed and instructed, consisting mostly of children and women, with but few men. In the first apartment, the women were spinning and sewing. We asked one of the girls if she could thread her needle ; she answered, " Yes, I will show you,"—and putting the head of the needle with the thread into her mouth, she brought it out immediately, completely threaded. She guided the end of the thread to the eye of the needle with her tongue, and pushed it through. In the other apartments they were making ropes, cords of silk, as well as window cords ; weaving carpets and rugs ; making baskets of willow, sacking, list and knit shoes, packthread, sail cloth, tarred mats, &c. &c. Many of their articles are manufactured with great neatness. But the musical performances surprised us as much as any part of their exercises. A dozen pupils are taught to play together ; one on an organ, and each of the others on a piano. The perfect agreement with which their fingers flew over the keys, and the exact concord of tones produced by so many blind musicians, were truly surprising. I asked one of the boys what they had been playing. He replied, " A hallelujah chorus." The whole number of pupils admitted into this asylum, from its establishment, in 1791, to the termination of the year 1816, is 465 ; of whom 134 had been deprived of their sight by small-pox, 120 by inflammation, 57 by cataract, and only 7 by imperfect organization. Thirty-nine had been born blind. The other cases were from various accidents and diseases. Forty pupils were dis-

charged in the course of 1816 ; of whom more than one half were capable of maintaining themselves by the skill they had acquired in the school. Two thousand pounds worth of goods manufactured in the institution, was disposed of during the same year.

Having a letter to W. Roscoe, Esq., a gentleman well known in the literary world, and deservedly esteemed, here and every where, for his learning and philanthropy, a friend accompanied me to his office, where he received me with great urbanity. He is a banker, and a man of business. The coldness and reserve of the mere scholar, are completely worn off by his business habits, while the contracted "single aim" of the merchant, is softened, dignified, and expanded by letters, and an extensive intercourse with literary men. He has been a member of parliament, and as such was an active and enlightened promoter of measures calculated to advance the interests of general humanity. His person is tall, his figure manly and prepossessing, and beginning to assume the aspect of venerable from the influence of age. We had but little time for conversation in this our first interview. We thence went to the Exchange, a spacious range of buildings appropriated to the concerns of trade. In the centre of the open area, where the merchants assemble, is a monument erected to Lord Nelson. It is a costly and finely executed piece of work ; but the style, or rather the design of it, really appeared to me to deserve the epithet of barbarous. Nelson is leaning back in an uneasy posture, with one foot trampling on the carcass of a dead man. Death is seen with his marrow bones peeping from behind a shroud, and, reaching out his arm, is grasping at Nelson's heart ! Beneath are four figures, representing different powers of Europe, sitting round the monument in a forlorn posture, with their hands chained to the stone near the feet of the conqueror. There are many other figures in the group indicative of the triumph of victory, and grief for the loss of the victor. In short, this group of statues, of recent execution, and which displays exquisite skill in the artist, appeared to me to breathe a spirit, which would better befit the capital of a nation of which a Cortes or a Tecumseh was the ruling chief. The triumph of a Christian nation ought surely to be differently exhibited.

On the 3d, I accepted the invitation of my friends R. to dine at Green Bank, the residence of their mother, about four miles from the town. The vehicle in which we

rode, is called a *car*. It is managed by one horse, but will easily accommodate four persons besides the driver. The latter has an elevated seat in front : the body of the car is ascended from behind, and contains two side seats, the passengers sitting with their backs to the wheels. At dinner we were joined by Dr. Traill, a gentleman who holds a high rank in Liverpool as a physician, and equally so among the learned for his scientific attainments. After dinner, W. Roscoe came in, and we spent the afternoon and evening in a lively and interesting conversation ; the first which I had partaken of, in genuine English society. We were all willing to listen to R. and Dr. T. The subjects were various, but among them, the probability and utility of a north-west passage to the Pacific Ocean, the means of ameliorating the penal code, asylums for the insane, &c. were prominent topics. The opportunity was to me highly interesting, and I have seldom spent a day more pleasantly.

The mother of our friend is the daughter of the late Richard Reynolds, of Bristol, so distinguished for his benevolence ; but, to our regret, she was not at home. Her husband was a gentleman of education and wealth, and of great respectability and influence in the mercantile affairs of the town. Their country residence at Green Bank gave us a very favourable impression of the rural taste of the English. A mansion with something of the Gothic in its structure, and very neat ; a lawn in front, sloping gradually to a fishpond, and ornamented with a variety of shrubbery ; a fine garden, containing a small but pretty conservatory ; gravelled walks, verdant grass-plots, and borders of flowers, all gave a smiling air to the exterior of this abode, while the neatness of its interior arrangement, evinced an equal share of enlightened taste.

We met by appointment, the next day, Roscoe and Dr. Traill, at the Liverpool Institution : a fine establishment for the promotion of literature, arts, and science. It was opened about a year ago, by an eloquent discourse from the former of these gentlemen, who is justly considered as the presiding genius of the place. It comprehends a spacious lecture room, a library, or reading room, a collection of natural history, a gallery of paintings, a laboratory, &c. It is liberally supported by subscriptions and donations.* The

* The origin and progress of this institution afford an incontestible evidence of the liberality which here prevails in the promotion of literature and science.

A prospectus of it was first laid before the citizens, at a public meeting, at the Liverpool Arms, in March, 1814. A committee was appointed to collect subscriptions, and

institution had just received an accession of fine casts from ancient sculpture, recently taken from the ruins of Phygalia, in Greece. They were deposited in the institution by — Foster, Esq. of Liverpool, who is one of those that brought the original sculpture from Greece. I had the pleasure of attending a lecture, by Dr. Traill, in this institution. He has been engaged during the winter in giving a course on natural history, to an audience of both sexes, a large proportion of whom are females. The number which usually attends is nearly three hundred ; such being the taste here for literature and science. Many of them are proprietors in the institution. Dr. T. is a pleasing lecturer, and quite a favourite with his female auditors. His style is clear and plain, his manners open and modest, and he evinces an extensive acquaintance with the different departments of natural history.

It gave me pleasure to find, in a conversation with W. Roscoe, at his office, that the subject of an amelioration of the penal code of England, had engaged his active attention, and aroused his warm and generous sympathies. He wished to obtain further information relative to our penitentiaries. I freely communicated what I knew ; and put him in the way of receiving from New-York, a farther account of them. He almost despairs of any important change in the British laws within a reasonable time, on account of the strong prejudices of the nation, and the fears of the government in the adoption of alterations in their long established usages. As an evidence of the severity of the present laws, and the arbitrary manner in which they are executed, he stated to me, that some time ago, a man was taken up for writing a song which was thought to have a dangerous tendency, tried, thrown into prison, and kept more than *two years*, in a narrow miserable place, where he could use no exercise. When finally liberated, he was emaciated, feeble, and scarcely able to walk. R. knowing him to be a man of talents and education, and destitute of support, procured for him a situation as tutor to the children of a gentleman ; which duty he fulfilled to satisfaction.

A town meeting was called, some time ago, to celebrate the fiftieth year of the reign of the present king. It was

in June following, they reported to another meeting that 20,200*l.* had been subscribed. An appropriation of 1000*l.* was also made by the corporation in furtherance of this interesting object.

proposed, that the money raised on the occasion should be employed in an illumination ; but R. moved that, instead of wasting it in a blaze, it should be employed in liberating all the prisoners who were confined for debt. This motion, though much opposed, prevailed, and the prisoners, about seventy in number, were discharged. There was a balance left of £800 sterling. This was invested in stock, and the interest goes to the employment of a solicitor, whose duty it is to inquire into the detention of every prisoner for debt, and to see that no frauds are practised upon him. A great number of unjust exactions, and vexatious proceedings, are doubtless prevented by this salutary and humane regulation.

On the evening of the 4th, I went to hear a lecture on astronomy, by an itinerant, who has acquired some reputation in the country, by the use of a large transparent orrery. The apparatus was clumsy, and the measured periods and cadence of the lecturer were nearly as artificial as the wheels of his machine.

From what I have yet seen of the society of Friends here, I must infer that there is rather less scruple with respect to the furniture of houses and the style of living, than amongst us. The men dress more neatly than we do ; but the costume of the females strikes me, I must confess, as being less conformable to the principles of correct taste, than that in our cities. The deep projection of the bonnet, seems to give an air of uncouthness to the whole person :—but I am aware, that on these points, our judgments are greatly influenced by custom and habit. There is nothing in the conversation and manners of the females to justify any unfavourable impression from their dress. They are polite, sensible, amiable, and exceedingly well informed.

The commerce of Liverpool is surprisingly extensive. Several of the warehouses are ten stories high. The ships are not stationed along the river, as in New-York, but taken into the docks to load and unload. The docks are prodigious excavations, occupying from two or three, to eleven or twelve acres each, and communicating with the river and with each other by canals and gates. The quantity of shipping which they contain is astonishingly great. Liverpool, within the last 40 years, has been completely regenerated. Prior to that period, its principal dependence was upon that abominable traffick to Africa, which has entailed so much misery, oppression, and corruption.

upon the inhabitants of the western world. Its population, since the abolition of the slave trade, has increased about 25,000. It is now a place of great wealth; and an admirable spirit of liberality prevails in the creation of funds for any laudable purpose; whether it be the establishment of a literary institution, or any object of charity or of public good, which has utility and expediency to recommend it.

After breakfasting with Dr. T. on the morning of the 6th, and enjoying a lively conversation with him and his wife, who is a Scotch lady, possessing a great deal of taste for the liberal sciences, he accompanied me in a walk to Everton, a range of buildings erected on a high ridge east of the town. From this ridge we had a charming view of the town, the harbour, the river, the opposite county of Cheshire, and the mountains of Wales in the distant perspective. Many of the houses and gardens at Everton, are in a style of considerable elegance. If the lower and more commercial parts of Liverpool appear unpleasant to an American, as they undoubtedly must, in comparison with New-York or Philadelphia, he will have to acknowledge, that these defects are, in a great degree, compensated by the newer parts of the town: and there are not many points, in either of the two last named cities, which exceed Everton in beauty of prospect. The bricks, of which the houses are all constructed, are of a brownish yellow, which is soon changed, by the smoke of the coals, into a dark and disagreeable hue.

We visited the Athenæum and Lyceum, places of literary resort, where the newspapers and journals of England, Scotland, Ireland, and France, may be found on the tables. Each of these institutions must have cost, at its first establishment, from £6 to £10,000 sterling, and must require for its support at least 500 subscribers, at one or two guineas each per annum. The prosperity of these several institutions, as well as the general tone of the society which has fallen within my notice, convinces me that those persons are greatly mistaken, who imagine that commercial industry and success are incompatible with an habitual attention to objects of literary taste, and to scientific improvement.

An order from W. Roscoe procured us an admission to the public botanic garden. It is a charming establishment. The variety and perfection of the plants, and the taste and

neatness of the garden, must strike every American visitor with surprise, because we have nothing to be compared with it. The garden contains about six acres of ground, and the proprietors have been very successful in procuring a gardener, who joins to an extensive acquaintance with botany, the greatest enthusiasm in the pursuit ; and he is, withal, a man of pleasant, affable demeanour. He was found keeping a little shop in one of the narrow streets of Manchester ; where, without much learning, without any garden, and in a crowded city, by yielding to the impulse of inclination and genius, he had become a great botanist. He is now transplanted into a genial soil, and flourishes to satisfaction.

A considerable part of the town is lighted by coal gas. I visited the factory, and found it superintended by —— Sadler, son to the celebrated aeronaut. He informed me, that he himself last year crossed the Irish Channel, from Dublin to Holyhead, in a balloon, and gave me two interesting pamphlets descriptive of their aerial voyages. The arrangement of the gas machinery is very similar to that described by Accum in his treatise on gas light. I need not therefore undertake to describe the process, especially as I may have an opportunity of observing it in other places, and under different modifications. This concern is managed by a company. The cost to families, for the use of the light, is from £3.7s. to £4 16s. per annum, for each argand lamp, according to its size, with permission to keep it burning till 10 o'clock. If it burn longer, the charge is increased. The company are at the expense of fixing the pipes as far as the entrance of the house.

The dinner hour at Liverpool, at which we have been invited, is five, but it is frequently half past five or six, before the company is seated at table. The entertainments are ample and excellent ; and if I may venture an opinion, I should say, there is rather more of easy dignity, and of the gracefulness and simplicity of true social feeling and hospitality, than is commonly to be met with on our side of the Atlantic : yet, on the whole, I have been pleased in observing the close resemblance in manners, of the same rank of society in both countries.

To-morrow we intend setting out for Manchester. We shall leave Liverpool under impressions of gratitude, for the kindness of those to whom we have been introduced.

LETTER III.

Manchester, 5th month (May) 10th, 1818.

MY DEAR ***** AND *****,

My last left us in preparation for our departure to this place. A little after twelve, having paid our landlord's bill, and added something to the pockets of the head servant, the chamber maid, the boots, and the porter, we mounted the top of one of the fourteen or fifteen stage coaches which daily run between Liverpool and Manchester. I had secured for myself the best outside seat—that alongside the driver; the coach was nearly full, that is to say, about twelve on the top and six inside. The distance is 36 miles. Thus commenced our first journey in old England, and in a style perfectly novel to us. The coaches are very handsome, generally containing four seats on the outside, and two within, and the roads are so good, that eighteen persons do not appear to be an over load for four horses. Every coach has some particular name painted on it, like a ship; and many of them, of course, have royal or princely titles. The horses are much like our own.

Except a slight shower, the day was fine, and the ride to us all, very interesting. Features of novelty and curiosity constantly present themselves to a stranger's eye. The country, through which we have passed, is level, and cultivated with the greatest attention. The thatched cottages of the poor, with small latticed windows, and generally a little enclosure in front, containing flowers, which, in this moist climate, exhibit their bloom to great advantage; the splendid seats of noblemen and gentlemen,—the boats, with expanded sails, moving along the canals,—the Mersey, contracted to a narrow stream, meandering through green meadows, and serving as a wide canal,—the pasture fields richly enamelled with daisies,—the farze, a bushy shrub, covered with bright yellow flowers,—the green hedge rows, nicely and evenly trimmed, sometimes with a round top, and sometimes a flat one,—the antique churches,—and the high hills at a distance,—all conspired to keep our eyes on the stretch, and our fancies on the alert. Prescott, Warrington, and Eccles, were the principal towns through which we passed. The two former are considerable places,

with narrow streets and old-fashioned houses, exhibiting, by their antique and sombre appearance, a great contrast to our more recent American towns. Numerous manufactories, particularly of small files and watchmakers' tools, are scattered along the road from Liverpool to Prescott. Warrington is noted for manufactories, particularly of sailcloth. Eccles, an old uncomfortable looking village, is celebrated for good cakes. On stopping at the inn, they were offered to us at two pence each, and we found them to be extremely palatable. They consist of a kind of pastry, with an intermediate layer of fruit. These cakes, it is said, are taken by travellers to all parts of England.

The approach to Manchester is marked by a cloud of smoke, and by numerous columns which are seen pouring out of the tall chimneys of the immense factories situated in all parts of the town. We drove rapidly through narrow and crowded streets, with high houses, to the Bridge-water Arms; where we were courteously met by a fat landlady, and accommodated with tolerably good rooms. The persons to whom we were recommended, by letters from Liverpool, living a mile from the inn, we employed the remaining day-light in walking through several of the streets. This town makes a better appearance than Liverpool, though the bricks have the same dark and rough surface. The houses are high, and the streets and pavements in the modern parts of the town, are of an agreeable width. The foot-walks are here made of broad flag stones; but in Liverpool, they are mostly of round stones or pebbles, which renders the walking unpleasant and painful.

12th. The persons to whom we had letters, have evinced all that kindness and attention which so greatly enhance the pleasure one receives in visiting a new place; not only by conducting us to manufactories, institutions, &c. but by introducing us to other persons of character and distinction. The celebrity of Manchester, as a manufacturing town, particularly of cotton goods, naturally excites a stranger's desire to visit the establishments, where so much ingenious mechanism is employed; and to witness the processes by which so many fine fabrics of every variety and colour are produced. Such exhibitions of human industry and talent, are certainly calculated to give an elevation to national character, and to inspire the observer with a more exalted opinion of the intellectual powers, with which it

has pleased Divine Providence to furnish his kindred race. It seems therefore to be regretted, that the interests of individuals and companies should in any case be considered as incompatible with such liberal admissions to their factories, as tend to gratify an enlightened and rational curiosity. In this respect there is a great difference in manufacturers, depending in some degree on their different views of individual interests ; but more, perhaps, on the temper of the man. The opinion, I believe, is gaining ground in England, that the advantages that have been conceived to arise from keeping their processes concealed, are more imaginary than real ; and accordingly a more liberal disposition prevails than formerly, in the admission of visitors and strangers.

The first factory we entered, was a glazing house ; that is, a place where calicoes are glazed. All the machinery in these factories, (or nearly so,) is propelled by steam. The process of glazing is a very curious one, varying in its nature according to the quality of the stuff, and the degree of polish to be given to it. The first thing is to cover the stuff with a very thin coat of bees-wax. This is done by causing the calico, chintz, or whatever it may be, to pass between two cylinders or rollers, which are longer than the breadth of the stuff, in one of which are grooves filled with long cakes of bees-wax, that project a little above the surface of the cylinders. These cakes are perhaps an inch thick, and placed five or six inches apart. The upper cylinder contains the wax, the lower one is kept warm by steam, which circulates through it by pipes. The cloth passes between the cylinders, and becomes in that manner slightly covered by the wax. Another process is to pass the stuff between two cylinders, one of which is of polished steel, and the other of paper ; the former being kept hot either by iron heaters, placed inside of it, or by the introduction of steam. The glazing material is applied to it by a sponge. The cloth enters very smoothly into the aperture of the two cylinders, and is pressed with prodigious force as it passes through. This gives a fine and beautiful polish to the stuff, as well as the stiffness observed in well glazed calicoes. Another mode is to place the stuff, after it has been waxed, in a machine, where a very smooth rubber of flint, about four inches wide, passes over it cross-wise, rubbing it backward and forward. The cloth is moved along under the rubber, by the motion of the machine.

We next visited a printing factory ; that is to say, a house where calicoes, chintzes, &c. receive the figures, which, in the estimation of the fair purchasers, give them their relative degrees of beauty and value. The contrivance of new and handsome figures is an object of great solicitude to the manufacturers : and so scrupulously does each one guard his own devices from the inspection of his rival neighbours, that they transport their goods through the streets in vehicles entirely closed and fastened with locks. The invention of new designs, furnishes support to a great number of ingenious men. I never before had any just conception of the manner in which calicoes are printed. I was witness to the process in which a piece of white muslin, forty-nine yards in length, was converted into printed calico, with a beautiful figure impressed upon it, in the lapse of four minutes. The operation is sufficiently simple. A hollow cylinder of copper, as long as the stuff is wide, is previously engraved with the intended figure. This cylinder is placed over a trough, into which the colouring matter is poured, and becomes partly immersed in it. A long sharp-edged knife, which they call the doctor, is so adjusted to the cylinder as to cleanse it, during its revolution, from all the dying substance, except what is lodged within the cavities of the figure formed by the graver. The cloth is passed under the engraved cylinder, and pressed during its revolution, into its cavities, by the forcible action of a smooth cylinder below. In this way, calicoes impressed with one colour only, are expeditiously printed. When more colours are to be put on, it is commonly done by a block. A piece of wood, about a foot long and six inches wide, is carved with the figure to be impressed. The cloth is firmly stretched over a hard surface ; the block is placed on a piece of woollen cloth covered with the dye, a portion of which adheres to it ; and it is then laid with accuracy on the stuff with one hand, and a gentle thump is given to it by the other. It is again dipped in the ink, and the figure is further extended. In this way, they go on, till the whole piece is covered ; and in this way, by going again and again over the piece, they can fill it up with a variety of colours. Thus chintzes are produced of the gayest forms, with large and brilliant flowers, birds, animals, and landscapes. The factory we were in, is one of the best in the town.

We visited several neat factories at Ardwick, in the suburbs of Manchester: in one of which, the wool, as taken from the raw fleece, is converted, by various successive and ingenious processes, into Manchester cord; a pleasant and valuable material for men's wear. The engine in this factory, of about fifteen horse power, is the neatest I have ever seen. In another extensive concern, we saw again the printing of calico, and the borders of shawls; and in another apartment, the process of singeing cords and fustians. This curious process consists in passing the stuff hastily, from one reel to another, over a red hot iron. It goes several times backward and forward over the iron, before it is sufficiently singed. This is necessary to give it a smooth surface. The colour produced by the iron is afterward bleached out.

Much of the mere manual labour of Manchester, such as weaving, is conducted by the workmen at their own houses, under the employ of the manufacturer. We saw in one room thirty or forty pieces of tape, woven by one motion of the hand; each piece having a shuttle of its own, and all of them driven simultaneously by the same movement. The cutting of fustians and velvets, by which the nap is formed, was another interesting process. The stuff is woven so as to form successive rows of elevated threads or loops. The cutter stretches it lengthwise over a frame, and, inserting a long slender knife, somewhat like a rapier, under one row of threads, and dexterously pushing it along, cuts the upper part of the threads or loops, and thus produces the shaggy surface.

After visiting another factory, in which a kind of cassinet is manufactured, Dr. Fearn and myself were conducted to the rooms of John Dalton, so well known for his acute and extensive researches in chemical science. We found the philosopher at his desk, surrounded by his books, his boxes, and his apparatus, chemical and philosophical, all in "delightful confusion." He is a member of the society of Friends, of plain unaffected manners, and highly esteemed in social life. His apparatus is very simple, and chiefly employed in experiments of research. So profound have been his investigations, and so high is his reputation as a chemist and mathematician, that the literary and philosophical society of this place have elected him their president; and he has been recently chosen an honorary mem-

ber of the Academy of Sciences of Moscow, and of the Royal Institute of France. He is a bachelor, of about fifty.

I breakfasted on the 10th, at Dr. William Henry's, in company with Dalton. The Doctor's family being absent, he boiled the eggs for us himself, and treated us with great ease and kindness. The conversation of two men so deservedly distinguished for science, could not but be highly interesting. It turned upon certain points of chemical theory—chlorine, acidity, alkalinity, &c. They are neither of them entire converts to the new doctrine of chlorine. Dr. H. with whom I afterward dined, conducts a chemical manufactory, celebrated for the purity and perfection of the articles it produces. He very justly noticed, in the course of conversation, the reprehensible practice pursued in America, of counterfeiting, not only the products of British manufacture, the containing vessel, the label and directions, but also the signature and seal. If this is unjustifiable in any case, it is emphatically so in relation to medical preparations, upon the purity of which depends not only the reputation of the manufacturer, but the health and life of the purchaser.* Dr. H. is remarkably clever in his particular department. He is now preparing for the eighth edition of his Treatise on Chemistry, a work which has greatly contributed to extend the science wherever the English language prevails. It has also been translated and published at Paris.†

Accompanied by Dr. C. of this place, I visited the infirmary and lunatic asylum, both of which appeared to be extremely well conducted. The infirmary is supported entirely by donations and legacies, but the maniacs pay their own way. New patients are admitted only once a week, (except in cases of particular urgency;) when the managers attend to read their recommendations, and inquire into their claims upon the bounty of the institution. We witnessed the ceremony of their introduction. The applicants, about twenty-two in number, were seated in a semicircle, answered to their names when called, stated their occupations, and by whom recommended. A large proportion said they were *wavers*. One man said he was a *slubber*; which I

* I understand that the British manufacturers are beginning to retaliate upon us by adopting a similar practice. Several varieties of American fabrics having, from their superior texture, grown into extensive demand, goods of the same appearance, with the same fold and stamp, are now sent from England, and sold here at a lower price than the American.

† The ninth edition of this excellent work has been for some time in circulation.

found was a technical name for part of the operation of calico-making. The buildings of the infirmary and asylum are neat, but plain specimens of architecture; three stories high above the basement, and pleasantly situated, in a wide place, called Piccadilly with a gravel walk surrounding a sheet of water in front, margined with grass, and partially planted with trees. The benefactors to this charity have been very numerous. The names of the benevolent individuals, with the amount of their contributions, are neatly exhibited in tabular frames, attached to the walls in one of the large rooms. Upwards of four thousand pounds have been given by unknown benefactors. The interior of those buildings evince the greatest attention to the comfort and recovery of the patients, and to economy in management. The bedsteads are of iron, which, besides the advantage of durability, more effectually secures them from vermin. The rooms of the women are designated by different scriptural female names, as, "Mary," "Ruth," &c.; while those for men are distinguished by masculine names from the same book. This mode of designating rooms I noticed also at the inns. At the Bridgewater Arms, the names are taken from the ancient mythology. Thus we read over the doors, the words *Morpheus*, *Aurora*, &c. In another inn, my companions and myself dined with several American acquaintances, whom we met here, in a room styled the "*Philadelphia*;" and the other apartments of the house received their titles from the same quarter of the globe. The surgical wards of this infirmary are numerously supplied, as might be expected, from accidents which constantly occur in the manufactories. In one year the number of these has amounted to 1381, while, during the same period, the number of patients of every description was 10,670. Adjacent to the infirmary, and under the management of its trustees, are excellent public baths, which, while they afford a great accommodation to the town, add to the revenue of the house. They consist of *hot*, *tepid*, *vapour*, and *cold baths*. The patients of the infirmary are not permitted to use these baths, as separate ones are provided for them within the hospital.

We were conducted to Chetham's Hospital, more commonly called the college. This is a charity school, founded about the year 1650, by Humphrey Chetham, a wealthy individual of Manchester. The building which it occupies, formerly belonged to the collegiate church, and is curiously

antiquated in its appearance, both within and without. About eighty poor boys are here lodged, fed, clothed, and instructed. They are to be the "children of honest, industrious, and pains-taking parents, and not of wandering or idle beggars, or rogues." They are clothed uniformly in a costume extremely *outré* in its appearance, and ridiculous in its form. Instead of pantaloons, they wear blue cloth petticoats, a yellow under petticoat, blue worsted stockings, and blue cloth caps. The little fellows are fed with a plain but wholesome diet, and have a very healthy and contented look. The building contains also a library, founded by the same benevolent individual, "for the use of scholars, and all others well affected, to resort unto." None of the books were to be taken out of the library, but "fixed or chained as well as may be." This library has become very valuable, and now contains 18,000 volumes. In the gallery are several specimens of natural history, and other curiosities, by way of museum. These were explained to us by one of the boys, as a matter of course, in a tone and manner that might have done credit to a well trained parrot.

The COLLEGIATE CHURCH of Manchester produced upon our minds sensations, to which we had, till then, been entire strangers. It was the first example of the genuine ancient ornamental gothic we had ever beheld. Its appearance is truly venerable. In viewing its curiously arched windows, its remnants of stained glass, its antiquated towers, its lofty ceiling, its numerous carved ornaments of angels playing upon different musical instruments; and especially, the grotesque figures that project from under the roof, in the form of four footed beasts, (but of what species no naturalist could tell;) the mind is carried back, as by a charm, to a period much more remote in the history of our species, than any which the monuments of our own country can possibly suggest. The feeling thus produced is no less solemn, than it is novel and delightful. This church is about 350 years old. The whole length of the edifice on the outside is 252 feet, and its breadth 132. The dilapidations of time are every where visible upon it; but pains are taken to repair its breaches in the style of the original structure.

The present week is a time of annual relaxation at Manchester, the factories being generally abandoned, and business suspended. The tide of population in the streets is

astonishingly great, and continues so till ten o'clock in the evening. Genteel persons are frequently accosted by beggars, some of whom are very miserable in their appearance. Various are the contrivances to attract attention, and excite the charity of strangers. Children are met, singing in the streets, with papers in their hands for sale, such as advertisements of shows, songs, and trash of various kinds. We met a woman playing on a fiddle, and capering through the street, to gain a few pence. In many of the wide streets and open parts of the town, machines are erected to furnish amusement for children, and to gain their pence. Large swings, in the shape of a boat, in which twelve or twenty can be seated, are suspended from the centre of a great tripod, and pushed backward and forward. Small wooden horses are mounted on a circular platform, and pushed round a central post, with children seated on them at a penny a ride. During two or three days of this *Whitsuntide* week, horse racing, and even bull baiting are practised, and the people assemble in the suburbs to view and attend these sports in excessive numbers. 50,000 are supposed to be sometimes collected at once.

Manchester is an ancient place, having evidently been a settlement of the Romans. It is built upon the river Irwell; into which empties, upon the border of the town, the river Irk, both very small streams. The population and size of the town have increased surprisingly in the last forty years, in consequence of its growing manufactories. In 1773 it contained but 41,032; in 1788 the number had increased to 50,000; in 1801 to 84,053, in 1811 to 98,571 without including the adjacent suburbs, which every stranger would consider as forming one undivided mass of buildings. These would swell the population of that year to 108,460; and it is believed that, at present, the whole number would amount to at least 130,000. Notwithstanding the great population and importance of this town, it is not incorporated, and has not the privilege of sending a single member to parliament; a privilege which is enjoyed, or rather abused, by many a borough in the kingdom of not more than 50 or 100 inhabitants. Manchester is governed by a head officer called the borough-reeve, and two constables, chosen annually from the most respectable of the inhabitants. The population is thought to be intelligent. Science is cultivated on account of its connexion with the pursuits

of the inhabitants. The portico, an institution supported by donations and subscriptions, is an elegant building, erected and opened in 1806, for the purpose of a library and news room, at an expense of £6000. There are, besides, several large libraries in the town, belonging to distinct companies. The literary and philosophical society deservedly enjoy a high reputation. Six volumes of their transactions have been published, and many of the papers have been translated into the French and German languages. The Lancasterian school here is considered as inferior to none in the kingdom. The house will contain about 1200 scholars.

Manchester is distinguished by its charities, and more especially that noblest of all charities, a liberal instruction of the children of the poor. This town was among the first to adopt the plan of the benevolent RAIKES, in the organization of Sunday schools. Nearly 8000 children attend the schools, supported by members of the established church, and about 5000 those for other denominations. What an aggregate of charity is here presented to the mind ! This benevolence goes far to remedy the evils arising from the severe tasks imposed upon the children in the manufactories, and which are so justly condemned by Southey in the letters of Espriella. There is no doubt, however, that a farther melioration of the condition of these infant labourers, is still called for by the soundest dictates of humanity. The subject is before parliament, and hopes are entertained that a law will be passed, giving every child a right to a certain portion of education, and restricting them to ten or eleven hours of confinement in the manufactories, instead of fifteen or sixteen, as now practised.

There are several peculiarities of accent and dialect, which cannot fail to arrest the attention of an American who has proceeded no farther into England than we have. The frequent use of the expletive, "*you know*," is very remarkable, and appears to be almost universal. The suppression of the *h*, when it begins a word, and its employment when not necessary, is a practice equally remarkable. "This is the place, *you know*," said a very genteel woman in showing me an improved fire-place, "where we *ang* on the *hiron*s." This pronunciation finds its way, in a certain degree, into very respectable society. The sound of *u* like *oo*, is frequent, but this is perhaps peculiar to Lancashire. "*Wul*, Betty," said our Liverpool coachman to

a woman who offered us some flowers, "how art *thoo* my loov. *I'm coomin doon* to gie thee a kiss." There is also a peculiar inflection of the voice, at the conclusion of a phrase, whether long or short, which conveys the impression of softness and kindness, and strikes my ear agreeably. It cannot be represented by the pen.

My companions wishing to make an excursion into Derbyshire, and being desirous myself to reach London by the 15th, I shall take leave of them to-morrow—and pursue my journey.

LETTER IV.

London, 5th month, (May) 16th, 1818.

MY DEAR ***** AND *****

ON the morning of the 13th, I took an inside seat in the Birmingham coach, and, proceeding rapidly through Stockport, Macclesfield, Leek, Cheadle, Uttoxeter, and Litchfield, arrived at Birmingham about eight in the evening. The fare was twenty shillings; distance, about eighty miles.

The towns and villages through which we passed, are marked, to an American eye, by their aged appearance. Many of the houses, even those in considerable towns, are covered with straw. The churches are mostly in the ancient style of architecture, and greatly contribute to the novelty and picturesque beauty of the scenery. In passing even hastily through Litchfield, the size and venerable appearance of the cathedral strikes the eye with delight. The house in which Dr. Darwin resided, was shown me by one of the female passengers, who had lived in the town. It has a modern appearance, and would be considered any where a very respectable mansion. Neither the house in which Dr. Johnson lived, nor the school-house in which he taught David Garrick, was to be seen from the road. Litchfield is a pleasant town, and the country around is rich, and in a high state of cultivation. We dined at Uttoxeter; and I observed, on this and other occasions, that rather more attention is paid to the decencies of form, than is generally practised by stage companies among us. Some person is desired, by the rest, to take the head of the table; and from him the waiter expects to receive

his orders for wine, or any other additions to the usual fare, and to him the bill is presented for settlement. Those who do not choose wine, are not obliged to pay for any that may be called for by the others. Our dinner, including a moderate portion of wine, was four shillings and six pence each. My company in the inside, consisted of two females, who were social and intelligent, and a clerical gentleman, whose name I did not learn. In England the clergy are distinguishable by the size and form of their hats. He entertained us with anecdotes relative to Bishop Watson and Deacon Paley ; with both of whom he had been acquainted. The attachment of these distinguished men to a self-denying religion, he did not seem to estimate very highly ; but he spoke of their talents, their writings, and their characters with great respect. In entering Birmingham we passed a large mansion with very extensive grounds, surrounded by a high brick or stone wall. It appeared to be the abode of opulence, but I was told it had been for some time within the grasp of the sheriff. The coach stopped at a large inn, called the Hen and Chickens, but the kindness of the friends to whom I had letters, prevented me from occupying a room in it.

14th. Having but one day to spend here, I regretted to find, this morning, that it was the time of an annual fair, on which occasion many of the manufactories are closed, the workmen devoting themselves to relaxation and amusement. Some of the wider streets and open places, are crowded with exhibitions of wild beasts, dwarfs, giant women, and learned monkeys, in sufficient variety. The shops exhibit a brilliant exterior ; and a vast variety of curious articles, mostly the workmanship of this great " British toy shop," are skilfully arranged in the windows to attract attention.

By the kindness of several of those to whom I was introduced, I visited some of the factories, and had a partial opportunity of witnessing their operations. The machinery for cutting and fashioning the shanks for buttons, works by steam, and is exceedingly ingenious. A manufactory of tea-trays, snuffer-trays, ink-stands, snuff-boxes, &c. evinced much dexterity, and in a striking degree, the perfection of art. The large trays are made of sheet iron, stamped into proper shape by a dye, then varnished and put immediately into a large oven or room with shelves around it, and heated by flues. The smaller trays are made of paper ; as are the snuff-boxes, ink-stands, &c. The paper is of a

coarse brown kind, made for the purpose. A block of wood is chosen, of the size and shape of the intended box ; the paper is pasted upon it, in successive layers, until it acquires the proper thickness ; it is then put into an oven, and when thoroughly dried, an incision is made around it as deep as the block, and the two parts are slipped off. It is then turned in a lathe, till perfectly smooth ; the parts are nicely fitted to each other ; and finally, it is varnished, and painted with various devices. In so great a snuff-taking country as this, the elegant finish of the box, and the finely wrought classical device on the lid, are matters of luxury and importance. We were politely conducted into a large button manufactory. The cutting out of the piece from the plate of brass, stamping it with the impressions, trimming the edge, soldering on the eye or shank, and the final polishing, afford employment to a great number of persons, a large proportion of whom are women. The button is polished in the lathe by applying to it a piece of blood stone. Several chemical manufactories, particularly one of sulphuric and nitric acid, and of some of the salts, which were shown me, are conducted on a large scale ; but as the processes do not essentially differ from those usually employed, it is unnecessary to describe them.

A very intelligent friend conducted me in the evening to the Birmingham institution for literature and science. The building contains a commodious lecture room ; an apparatus room, in which was a good collection of philosophical instruments ; a laboratory, well provided with furnaces, &c. ; a room containing an assortment of chemical apparatus ; and another room especially appropriated to galvanic experiments, and supplied with a large battery of the most modern construction. There is also a library pertaining to the establishment. Such an institution as this, supported by private liberality, speaks volumes for the energy and intelligent industry with which the useful arts are prosecuted, and enables us more fully to appreciate the character of a people who have carried those arts to such a wonderful degree of perfection.

I did not ascertain, whether, in Birmingham, a stranger is recognised as such within a very short time after his arrival, as in Manchester. In the latter town it is said, that within a few hours after the appearance of a stranger, his name, place of residence, business, and all other particulars, as far as they can be learned by careful inquiry and rapid commu-

nication, are known throughout the place. This arises from the caution which is conceived to be necessary as a guard to their manufacturing privileges.

The streets of Birmingham are of a good width, but the side walks are mostly, as in Liverpool, paved with round stones instead of bricks or flags.

I ought not to leave this place without an acknowledgment of the kindness received from several friends, and particularly those by whom I was so hospitably entertained.

15th. After an early breakfast, I took leave of my kind host and family, and set out in the coach for Oxford. I had previously secured an inside seat, but as the morning was pleasant, I placed myself on the driver's box. This an inside passenger has a right to do whenever all the outside seats are not taken up; and when they are, he can generally find some one to exchange with him. On the seat immediately behind me, and on the very top of the coach, were four genteel females. There is nothing to secure their safety, in this very aerial position, but a slender iron railing, about a foot high, extending round the back and ends of the seat. Those who sit at the extremities of this seat have scarcely any thing to rest their feet upon. In truth, I felt very apprehensive of my own safety, the first time I ventured to ride in this lofty style. Custom, however, soon reconciles it, and nothing is more common in stage travelling, than to find ladies preferring a seat on the top. Indeed, so great are the advantages it affords with respect to air and prospect as well as cheapness, it is no unusual thing to see the top seats full, while the inside is entirely vacant.

We passed through Solihull, but the country was not very attractive till we came to Warwick. This town gives a name to the county. Its greatest curiosity is the castle, one of the oldest, largest, and strongest in the kingdom. It is built upon the margin of the river Avon, and its appearance is truly venerable. The extent of its walls and the size of its tower, give one a most unfavourable idea of the state of society, which could require so much expense and labour to secure the safety of its possessor. At Leamington we were transferred to another coach. The person whom, from his neat dress and bustling air, I took to be the owner of the hotel, and generalissimo of all the forces attached to it, proved to be the coachman. But, in reality, these coachmen are rather to be considered as gentlemen of a particular rank. They are well dressed; and take

the liberty as they pass along, to speak and bow to people of respectability, and receive the same notice in return. We passed through Bambury and Deddington to Woodstock. Near this place the extensive grounds and park of Blenheim, the seat of the duke of Marlborough, appeared in sight, and the monument erected in commemoration of the victories of the duke over the French forces at Blenheim, rose fully into view. It is situated in the park, and attracts the attention of passengers at the distance of several miles. The park was seen from the road, like a long range of wood, and had more the appearance of an American forest than any thing I had observed in England. It is eleven miles in circumference, and is said to furnish one of the finest rides imaginable. Blenheim-house was not in sight from our road, and my time did not admit of a digression, though it is certainly an object of rational curiosity to a stranger in England.

We arrived at Oxford at half past six ; and the evening being pleasant, I immediately engaged a guide, and spent two hours and a half in exploring the curiosities and beauties of this ancient and renowned seat of learning. If any thing in art and antiquity, in Great Britain, can strike an American eye with delight and surprise, it will here be met with, probably, in its greatest perfection. The exterior of the colleges, presents an imposing aspect of antique greatness. The massy structure of the buildings, the number of the statues, and quantity of carved work within and without, would seem to require the labour of ages. Every thing I saw was in a style of neatness. The yards, the gardens, the interior of all the apartments, are kept in the greatest cleanliness and order. The walks are highly beautiful. A broad gravelled pathway, with rows of high and majestic elms on each side, extends, in some cases, a mile in length, winding along the margin of a river or canal, and surrounding a beautiful meadow. The rooks build their nests on the tops of the trees, and fly about the college buildings, in great numbers, unmolested. The painted or stained glass in the chapels, the tessellated pavements, the carved ceilings, and the numerous fine paintings with which they have been ornamented, hold the eye and mind long in admiration. I was in the theatre, or rather amphitheatre, in which the emperor of Russia, and king of Prussia, received their honorary degrees, sitting on each side

common, on this day's road, than on any over which I have passed. We stopped at Henley, and took a cut of cold roast beef, of excellent quality—an article of which a good English inn is seldom without a supply. Henley is rather a neat town; I mean in comparison with other English towns; but it exhibits too much of the wear and tear of age, to be compared, in point of beauty, with our modern American villages. We here crossed the Thames on a fine bridge. This stream, so famous for the mighty doings with which its shores have for ages resounded, is at this place too shallow for any other craft than large boats, and of a width which would entitle it, in New Jersey, to the appellation of a creek. It is however a pretty stream; and the landscape, after we had ascended the hill on the side opposite Henley, is exceedingly fine. We passed, in succession, through Maidenhead, Brentford, Turnham Green, Hammer-smith, and Kensington, and came into London, by the entrance of Piccadilly. The three last named villages seem to be little more than a continuation of this street.

The bustle and activity we encountered, on entering the metropolis, were excessive. Though long accustomed to the busy movements of the busiest city in our own country, I found on this occasion enough of novelty and peculiarity to convince me, had I not known where I was, that I was entering a much more populous and wealthy place than any I had ever seen. The numerous equipages, with splendid liveries, some of which had three footmen standing behind them, dressed in white uniform, with large cocked hats, and each with a staff in his hand; the multiplicity of stage coaches, passing in and out, covered, as well as filled with passengers; the trains of hackney coaches moving in all directions; and the crowd on the foot walks, in which so great a variety of costume and figure is discoverable,—all contribute to render the first impression which London makes, very imposing to a stranger. We turned down St. James's, and drove through Pall Mall, the Strand, Temple Bar, and Fleet-street, to Ludgate Hill, and into the court yard of the Belle Sauvage. I took up my quarters at St. Paul's Coffee House, immediately facing the yard of the great Cathedral, and under the sound of its powerful bell. My first concern was to get a map of the city, and with this to find my way to the residence of those friends whom I wished more immediately to see.

LETTER V.

London, 5th month (May) 23d, 1818.

WHATEVER excitement of imagination or feelings a first entrance into London may produce, it is soon found to be a bustling, dark looking city, with narrow, dirty streets, and high houses, and with far less of cleanliness and comfort, externally, than in either of our principal towns. It requires some effort of resolution, therefore, to prevent curiosity from subsiding into disgust; and from hastening to a conclusion, that there is nothing beyond the most noted public buildings, and exhibitions, that can compensate for much sacrifice of time, or furnish materials for a protracted stay. But a few days of attentive observation are sufficient to dissipate this error. As the great extent of the city, its various customs, its ramified police, its very numerous and diversified institutions, its monuments of art, and science, and charity, come to be gradually presented to one's notice, it will be found, that month after month may be assiduously employed in researches and inquiries; and that hardly within six months, could a stranger, desirous of availing himself of all the opportunities of studying the human character which London affords, complete his survey of its interesting and almost endless peculiarities. The expedition I must necessarily use, in pursuing the plan I have prescribed to myself in this journey, will enable me to go but a little way in a general description. But in truth, it is not the business of a traveller to write a statistical account of the countries he visits; nor can it be expected that he will enter very minutely into topographical details. His habits must necessarily be desultory, and such also will be the character of his observations.

The American acquaintances I have found here, together with the few letters I brought with me, have introduced me to a great number of the society of Friends, in whom I find a full share of characteristic hospitality and kindness. Most of the time since my arrival has been occupied in attendance of the yearly meeting of the society. Its concerns, upon the whole, are transacted much in the same way as in America. Constituted as the government of this society is, upon principles strictly republican, allow-

ing to each member the right of attending all its meetings of discipline, as well those which are chiefly legislative as those which are executive, it was to me a point of some interest, to ascertain whether the style and temper of such meetings in England would be found to have any nearer resemblance to the aristocratical tone of British society, than to the greater equality and more general liberty of speaking and acting enjoyed under our constitutions. An attentive, and I think impartial observance of the progress of the business in this yearly meeting, obliges me to conclude, that there is nothing in the circumstance, simply, of living under a monarchical government, which encourages the exercise of arbitrary power, at least on occasions of the kind I now allude to. Human nature is the same under all governments ; and as far as this experiment goes, I am persuaded there is the same love of power, and the same disposition to exercise it individually, in America, as in England. I have no where seen a more scrupulous regard to the rights of individuals in the deliberations of a religious assembly, than was evinced throughout the proceedings of this meeting.

6th month (June) 1st. At a meeting to-day of the committee of the British and Foreign Bible Society, I was introduced to several gentlemen, who have greatly distinguished themselves by their zeal and activity in the deeply important cause which this society has undertaken to support. Lord Teignmouth, the president of the Society, officiated as the presiding officer of the committee. He was not distinguished in dress from the other members. His manners are plain, easy, and affable, and his countenance is expressive of those amiable sensibilities which might be expected of a decided advocate of the Bible, and of the excellent biographer and friend of Sir Wm. Jones. Although the committee meets weekly, the business which it has to transact at each meeting is sufficient to occupy a long sitting. Much of it consists in reading the numerous letters addressed to the society, from almost all parts of the world. The secretaries, Owen, Steinkopf, and Hughes, are eminently qualified for the duties which devolve upon them. The great and successful efforts, which they and other officers and agents of this society have made, to establish and extend its influence, will cause their names to be transmitted to posterity as benefactors of mankind ; while,

in the moral history of England, the establishment of this society must ever form a most brilliant era, and its progress be marked with a lustre cheering and delightful to every friend of religion and peace. There were several foreigners of distinction present at this meeting of the committee ; particularly Professors Cuvier, of Paris, and Pic-tet, of Geneva. Much animated discussion took place, and several able speeches were made, on questions that arose in the course of the business. I noticed, for the first time, the call of *hear, hear*, when any thing particularly interesting was stated by the speaker. This kind of applause is common, I believe, at all public meetings, as well as in parliament.

The Bible Society occupies a large building in Earl-street, near Blackfriar's bridge. In one apartment is a library, composed of all the most noted editions of the Holy Scriptures, in every language in which they have been printed. In the room in which the committee meets, are elevated seats for the accommodation of spectators, who may be introduced by the members. There is generally a number of strangers present ; for the business and the debates of this body, often furnish as much interest and rational entertainment as those of the house of commons.

I was early introduced to the weekly levee of Sir Joseph Banks, and have several times availed myself of the advantages of such an introduction. It is a focus, where one may be almost certain of meeting with the most distinguished scientific men of the metropolis, and with learned strangers, not only from different parts of Great Britain, but those also from foreign countries who may happen to be in London. Sir Joseph's house is pleasantly situated at one corner of Soho Square. It is a plain building, and not very large. A stranger must be introduced either by a letter or by an accustomed visiter ; but after the first visit, he is at liberty to go as often as he pleases, either to the evening conversazione, or to a weekly breakfast, at ten o'clock in the morning. The levees are held on the evening of the first day of the week, but at so late an hour as not to interfere with the usual exercises of that day. The company generally begin to assemble about nine, and continue to come and go, without ceremony, until about twelve. The front door opens into an anti-room, where are two or three servants in attendance—one of them at least always

in livery. They direct strangers where to leave their hats and umbrellas, and show them the way to the library above stairs. This apartment forms two sides of a square. Sir Joseph, who, from long and severe attacks of the gout, has been for many years unable to walk, sits at a table at the angle of the library, and receives the salutation of each person who enters, and engages in easy conversation with those who wish to approach him for that purpose. He generally wears a star on the breast of his coat, indicative, I suppose, of the order of knighthood to which he belongs. He is now in the seventy-fifth year of his age, and bears evident marks of bodily infirmity, but is still cheerful, still alive to the progress of science and the arts, and ever ready to communicate from the capacious store of his knowledge. He must, however, ere long yield his station as president of the Royal Society, and that still more important rank he has so long filled to the honour and extension of British science, as the liberal patron of ingenious men—as the Macænas of his age and country. His place, it is to be feared, will not be easily supplied, for few there are, even in London, who can unite to the finest relish for science, and to the most devoted zeal for the progress of useful knowledge, an income of £18,000 per annum, and a liberal hand in its distribution! It is by a distinction of this kind, that the name of Sir Joseph Banks has been famous in the annals of English science, since, in the year 1768, he sailed as naturalist with the celebrated Captain Cook, in his first voyage of circumnavigation. At my first visit at this place, I met with Sir Humphrey Davy, a circumstance which I considered fortunate, for he informed me that the next day he was to leave London for the continent, where he expected to remain a long time. From the just celebrity of his name, an interview with him was desirable. His person is rather below the middle size, his countenance open, his manners lively and animated, and his conversation flowing and vivacious. He obligingly gave me a note, which transferred to me, for the time being, his right of attendance at the reading-room, library, and lectures of the Royal Institution. Having married a lady of fortune, he no longer officiates as a lecturer,—but his attention is still occasionally directed to chemical research and experiment; and from his known ardour, and his being still in the middle period of life, it may be hoped that the brilliant career

of discovery, which he commenced at a very early age, has not yet arrived at its termination. Among the most distinguished foreigners whom I met in Soho-Square, was Cuvier, the celebrated naturalist of Paris. He meets in London with that warm respect which his high reputation, his great attainments in natural history, and his personal merits, entitle him to receive. At the same meeting were two young Persians, who have resided some time in London for purposes of science. Their inquiries, I am informed, are chiefly medical. They were dressed in the costume of their own country, in silk mantles and turbans. They spoke English tolerably, and appeared to be men of some acuteness of observation. The visitors at this celebrated rendezvous are perfectly easy in their intercourse with each other. Each one is at liberty to sit, stand, or walk, to converse, or to read, as he may think proper, and to withdraw without ceremony, when it may best suit his convenience. On a table, at the extremity of the library, are to be found the latest journals, and other recent scientific publications, of England and other countries. Tea is served round, in the course of the evening. The only nobleman who, at this time, appears to be a frequent visiter at these assemblies, is Earl Morton, one of the vice presidents of the Royal Society.

2d. After dining to-day with my worthy friend William Allen, whose residence, in Plough Court, is the resort of science and philanthropy, he accompanied me, with two of my Philadelphia acquaintance, to the house of commons, for the purpose of gaining for us an admission to the gallery. We had an opportunity, in the lobby of the house, of meeting with several members, by whom my friend was well known. We easily obtained a passport to the gallery; but it was so entirely full, that, after remaining some time, crowded and squeezed most uncomfortably, and but just able to catch a glimpse of the speaker's head and long wig, we thought best to retreat; and, rejoining our conductor, we all went to Westminster Abbey, and spent some time in surveying the curiosities of that celebrated mansion, where the remains of the great, the learned, the beautiful, and the brave, repose, in all the sumptuousness of art and affluence. Notwithstanding the vast number of names that are here emblazoned, there is still room enough for future ages. Though my youthful imagination had been kindled with accounts of Westminster Abbey, I must confess

that, in point of antiquity, variety, costliness, labour, and powers of the chisel, I found more to admire than I had anticipated. It is curious, that among monuments of marble, and images and statues of the finest sculpture, there should be interspersed wax figures of a great many personages, dressed in the costume of their time and rank. These are enclosed in glass cases, to protect them from the dust. Some of them are rather paltry. Queen Elizabeth, for example, is so black and ugly, she well might, with a change of dress, be put into a museum, and called the witch of Endor. Nelson has on the same breeches and stockings that he wore at Trafalgar; and a pin is stuck into his coat to show the direction of the ball. Of the statuary, none pleased me so much as that executed by Bacon. We walked over the mortal remains of Pitt, and Fox, and Ben Johnson. The Poet's Corner can be seen without a fee; but to go farther, each visiter pays 1s. 9d., and is attended by a guide, who explains every thing, and at the end of his course receives his "voluntary contribution," and transfers his company to another, who, in turn, tells his tale through a long series of aisles and chapels, and then turns them out, with "What you please, gentlemen." The form of the abbey is that of a cross, which I understand is the figure of most of the cathedrals in England. Its length, from east to west, is three hundred and seventy-five feet, and from north to south it is two hundred feet. The height, from the pavement of the nave, to the inner roof, is one hundred and one feet. It is certainly one of the oldest edifices in the country. According to a legendary story, the first abbey was consecrated by order of Sebert, king of the east Saxons, who died in 616. The bishop of London was to perform the ceremony, but "St. Peter himself was beforehand with him, and consecrated it in the night preceding the day appointed by his majesty for that purpose, accompanied by angels, and surrounded by a glorious appearance of heavenly lights." Wonderful as this was, it did not protect the fabric; for the sons of this king, relapsing into paganism, quite deserted it, and it was subsequently reduced to a heap of ruins by the Danish invaders. Edward the Confessor cleared away the rubbish, and erected a structure, magnificent for that age; but it was not till the reign of Henry VII. that the superb chapel now known by his name was planned and executed; the first stone of which was laid in 1502. In the reign of Henry VIII. and during the civil commo-

tions, it sustained great ravages. It became at length an object of parliamentary attention, and Sir Christopher Wren was employed to give it a thorough repair. It is altogether impossible, by any verbal description, to convey an adequate idea of this magnificent pile—solemnized as it is by the tombs and monuments of the great, through so many centuries of English history. Here may be traced the progress of sculpture, from the rude Saxon monument, through the Gothic in all its stages, to the refined and poetic beauty of modern art. There is a curious mixture of the awful and ludicrous in the appearance of the ancient tombs. On a huge stone chest, containing the remains of the deceased, may be seen a sculptured image of him, clad in full armour, lying on his back, and frequently with the hands raised, as if in the attitude of prayer. A husband and wife are sometimes placed side by side, in this style of solemn formality. Of the recent monuments, that of Newton is considered as one of the finest. His statue is placed in a recumbent posture, leaning his right arm on four folios,—DIVINITY, CHRONOLOGY, OPTICS, and PHIL. PRIN. MATH., and pointing to a scroll, supported by winged cherubs. Over him is a large globe, projecting from a pyramid behind, whereon is delineated the path of the comet of 1680, with the signs, constellations, and planets. On the globe sits the figure of Astronomy, with her book closed. Underneath the principal figure is a most curious bass-relief, representing the various labours in which Sir Isaac Newton chiefly employed his time; such as discovering the cause of gravitation, settling the principles of light and colours, and reducing the coinage to a determined standard. The inscription on the pedestal is in Latin, intimating that, “by a spirit nearly divine, he solved, on principles of his own, the motion and figure of the planets, the paths of comets, and the ebbing and flowing of the sea; that he discovered the dissimilarity of the rays of light, and the properties of colours thence arising, which none but himself had ever thought of; that he was a diligent, wise, and faithful interpreter of nature, antiquity, and the Holy Scriptures; that, by his philosophy, he maintained the dignity of the Supreme Being; and, by the purity of his life, the simplicity of the Gospel.” The inscription concludes with the exclamation—“How much reason have mortals to pride themselves in the existence of so great an ornament to the human race!”

The most splendid and admired statue, in the abbey, however, is one of Lord Chatham, executed by Bacon, and erected by order of parliament. The great orator is dressed in his official robes, and is leaning forward, with his right hand extended as in the attitude of speaking. Under him are figures of Prudence and Fortitude. Below them is Britannia; and under her are two noble figures, symbolical of earth and ocean.

3d. Having breakfasted this morning by previous invitation, with J. Butterworth, a member of parliament, at his house in Bedford-square, and happening to mention my disappointment yesterday at the house of commons, he kindly offered to procure me admittance to-day at an early hour. On calling upon him again at one o'clock, he conducted me to the house, and introduced me in the passage to several of the members, and, among others, to that distinguished philanthropist, William Wilberforce. A few minutes conversation with him was sufficient to convince me of the truth of what I have heard from others, that he is perfectly amiable in private life. Having a little time to spare, I went into the court of chancery, and heard some dull pleadings before the vice chancellor, by lawyers with large powdered wigs, hanging down their shoulders. In compliance with ancient custom, the barristers all wear these wigs, as do the clerks of the court. To my unpractised eye, there is a stiff formality in their appearance, which borders closely on the ludicrous.

Being introduced in the lobby to Sir J. Macintosh, he obligingly conducted me to the gallery of the commons, where I obtained a good seat. There are but two modes of admission to the gallery,—a personal or written order from a member;—or a silver ticket, of the weight at least of half a crown, deposited with the door keeper. Whether the latter proceeding be contrary to written law, I know not: but if so, it is so universally connived at in practice, that it ceases to be regarded as a bribe. The room in which the commons assemble, is very simple in its arrangement, and without ornament, except a gilded coat of arms over the speaker's chair. The seats are covered with green leather cushions. They are raised one above another, so as to make the most of the space. There is not a chair in the room, except that of the speaker. The members have no desks before them. If they wish to make notes,

they must do it on their knees, with a pencil. A flat table stands in front of the speaker, at which sit two clerks. On this table lies the mace, a large gilt club with a crown at one end of it. The members enter and take their seats with their hats on, and occasionally booted and spurred, or with whips in their hands. They generally seat themselves in the order of political fraternity,—the ministerialists occupying one side of the house, and those in the opposition, the other. The speaker and the two clerks wear large powdered wigs, hanging in ringlets down the shoulder, the speaker's wig being larger than those of the clerks, and more in front. The members began to assemble about 4 o'clock. A number of bills were dispatched with great expedition;—the speaker uttering, in a monotonous tone, and without stopping, "those in favour say aye—the contrary no—the ayes have it." The second and third reading of a bill, as they call it, is dispatched in the same half-second style. A message from the lords was announced. The question whether the messengers should be admitted, was put and carried with equal flippancy. The mace-bearer then approached the table, took up the mace, poised it against his shoulder, then went to the door, and escorted to the table two men with large powdered wigs. They were the clerks of the upper house. Having delivered their message, they bowed, retreated backward, keeping their faces to the speaker, and bowing as they retired, till they reached the gate of a railing, which extends across the floor, and thus made their exit. These messages occurred several times during the afternoon, and were managed in the same way. When a sufficient number of members had assembled, Sir Samuel Romilly rose, and moved for farther inquiries into some cruelties that had been practised, in one of the West India islands, by a clergyman, on one of his female slaves. He read a statement of the case, and spoke some time upon it. His manner is plain and clear, but not eloquent. He was followed by Wilberforce, who, in a speech of about twenty-five minutes, advocated, in a style of great animation, the cause of suffering humanity. He urged the necessity there was for that house, remote as the West Indies are from the parent country, to keep alive to the welfare of the negroes, and to be prompt in calling for information, on all needful occasions, relative to their treatment. I was surprised to see so much vivacity

of manner, and such a vigour of thought and expression, in a man whose hairs have long since been bleached in the defence of this deeply injured people. The papers in his hand shook with the vehemence of his gesture, while he expressed his indignation at the cruelties which the case exhibited. He is certainly a great orator. His person is small, and though not prepossessing, its defects are soon overlooked in the glow of intelligence and benevolence which beams around him. You will conclude it was highly gratifying to me, to have an opportunity of hearing this veteran of humanity make a speech, and that too on his own long heart-felt cause;—a cause which he has brought to so triumphant an issue. It was the more gratifying, as I am informed he seldom, of late, speaks in parliament. The house agreed to the motion *nem. con.* The next subject of interest was a motion relative to a parliamentary inquiry into abuses upon charities, chiefly devoted to education. The subject was introduced by Brougham, in a speech of about an hour. It was a masterly display of popular talent; abounding with keen invective against the house of Lords, for having stripped the bill of some of its best features;—against the courts, for those reiterated postponements and delays, by which a plaintiff, “with a verdict in his favour and all costs paid,” is often ruined! This gentleman is, unquestionably, a brilliant speaker. The flashes of his eloquence were often interrupted by applauses, in the loud repetition of “hear, hear.” His person is slender, his manner extremely energetic, but rather too impassioned to produce conviction. He was followed, in a speech of considerable length, by Sir Francis Burdett; a man of great ingenuity and cunning, fertility of thought, and correctness of diction,—but with an interrupted enunciation, and a dry unimpressive manner. The subject proved to be one in which the house was much interested; for it called up in succession, Lord Castlereagh, B. Bathurst, Lockhart, Vansittart, (chancellor of the exchequer,) J. Smith, Canning, and some others of inferior note. The speeches of these gentlemen were too short to call into much exercise their particular powers of oratory. I could scarcely have chosen a day more favourable to the wish of hearing the best speakers of parliament upon subjects of general interest.

The speeches are taken down by the reporters, or men

employed for that purpose by editors of the public prints. These men station themselves on the upper bench of the gallery, and so negligent are they in attention to the speakers, and talk and laugh so much with each other, as greatly to annoy those who sit near them, and to excite one's surprise at the correctness of their reports. They furnish a pretty good outline of the argument, but give little or nothing of the spirit, and force, and wit of the debate. A speech of half an hour they will condense into half a column.

The house sometimes continues in session till 2 or 3 o'clock in the morning, and to obtain a good seat in the gallery, it is necessary, when any important business is anticipated, to take possession as early as 2 o'clock p. m. I was relieved from this excessive fatigue, by the member with whom I had breakfasted. About six he came up to the members' gallery, and beckoned me to come out, and to leave my hat as a guarantee for the same seat on my return. He took me to an eating room, an apartment of the Parliament House, ordered a beefsteak to be immediately prepared, and in the interim conducted me to the House of Lords. A small number only of their Lordships had assembled, and business had not commenced. This chamber is not much better furnished than that of the Commons; and is very inferior indeed, in costliness of decoration, to some of our halls of republican legislation. In the eating room were Lords Sidmouth and Kenyon taking their luncheons. The latter is the son of the celebrated Judge, and is a remarkably fine looking young man. After dining, I resumed my seat in the gallery; and in the course of the evening, was again beckoned out by my kind friend, to partake of a dish of tea. This we were served with, in a different room from the former. Several members of the lower house came into the tea room, with whom we had a pleasant conversation, on topics relative to America.

In the course of the debate on the abuses of public charities, I learned that all those under the direction of the Society of Friends, were, by the bill, exempted from inquiry. This is rather singular, and is certainly an exemption not asked for by the society. The house broke up about twelve. We were once or twice, in the course of the evening, turned out of the gallery. This is done on particular occasions, and always, I believe, when the ques-

tion is taken on a bill. It is effected by the speaker's calling out, in a loud voice, "strangers withdraw."

4th. This is the king's birth day : but instead of going to St. James's to see the grand parade of the nobility advancing to the palace, accoutred in the "olden time,"—lords in bag wigs, large sleeves, and long embroidered waistcoats, and ladies riding in sedan chairs, with hooped petticoats spread like sails on each side,—and then the train of all the stage coaches in London, in their finest garniture, extending for miles through the streets,—I directed my steps another way.

The British and Foreign School Society had resolved to have, on this day, an exhibition of all the schools, collectively, that are under its direction. Preparation was made for this purpose at Highbury, about four miles from the city. A dinner was to be provided at a large inn, for which tickets were distributed. The children were collected from the different schools of the society, in London and its neighbourhood, to the number, probably, of 5000. They were assembled in a green field, adjoining the tavern, so as to form three sides of a hollow square. Each school was encamped in a separate division, under the control of its teacher ; and on the other side of the square, a stage was erected large enough to hold about fifty people, and benches were provided in front of the stage, for one division of this juvenile army, equipped with spelling-books, slates, and Bibles. The day was almost without a cloud. The view of so many children, of both sexes, sitting on the grass, or amusing themselves, or engaged in some of their school exercises ; and the great number of people collected to witness the exhibition, formed a perspective highly gratifying to the benevolent sensibilities of the spectators, and produced a general expression of delight and pleasure. A little after 12, the arrival of the duke of Sussex was announced, by the sound of a bugle. He entered the field without any particular escort, and advanced to the foot of the stage. The press of the crowd was excessive, and the anxiety to get on the stage with the duke equally so. Through the kindness of some of the managers, I was invited to ascend, and was placed at the back of his royal highness's chair. He is a remarkably fine looking man, about six feet high, and was not distinguished by his dress

from others, except by the glittering star fastened to his left breast. He soon showed himself to be a social and jocular kind of a gentleman. As chairman of the day, he commenced an examination of some of the children, but as the exercises were simply those of spelling, reading, &c. they were not particularly interesting, excepting those of a class of Jewish children, who were exercised by their teacher, also a Jew. They repeated the ten commandments, and some of the Psalms, in Hebrew and English. The duke frequently spoke to the audience around him, and seemed very desirous to explain every thing to the satisfaction of his hearers. He proved himself to be a man of very easy address, and by no means unaccustomed to public speaking. After the examination, the company was addressed by H. G. Bennet, M. P., Alderman Wood, and others, and motions of thanks were carried to the managers, &c. The company gradually moved around the field to inspect the children, and then passed through the gates, where they were furnished with an opportunity of contributing what they pleased to the funds of the society. The duke, in his speech, had urged the company to be liberal; and expressed a hope that the ladies, who had volunteered their services in holding the plates, would station themselves at the gates, and allow no gentleman to pass, that did not contribute. Provision and beer were liberally distributed to the children in the field. At the appointed hour, those who were furnished with tickets, passed into the dining room, to the number of about 170. The duke presided at the table, and when the cloth was removed, he rose and proposed, as a toast, the king's health, and made a long, and not an indifferent speech, in relation to the school concern, and to the interest his majesty had taken in it. The toast was drunk with three times three, the company all standing, except the "Friends" present, who kept their seats quietly, the chairman having expressly stated, at the commencement of his remarks, that the members of that society were at liberty, on those occasions, to act as they saw fit. The health of the queen, and of the prince regent, was, in like manner, proposed and drunk separately; the royal speaker, finding something new to say each time, and generally endeavouring to say something calculated to promote hilarity. He next gave the health of his brother, the duke of Kent, and humorously adverted

to the latter's being about to get married. In short, our chairman showed a decided inclination to keep the company in good humour; and he carried his purpose, as it appeared to me, quite far enough for the dignity of a prince. Some one sang a song. The duke then said he would sing himself,—he began—forgot what was next,—began again, failed a second time, and a third—laughed at his own blunders—and then blundered through a song of a perfectly bacchanalian character,—and received the applauses of the company! As this was the first specimen of royal manners I ever witnessed, I have been perhaps too minute in the description.

5th. In company with Dr. Stevenson, of New-York, I went to the house of our celebrated countryman, Benjamin West. He was indisposed in his chamber, but on receiving my letter of introduction from S. Coates, of Philadelphia, he directed the servant to invite us to his room. We found him seated behind a skreen, in his gown and cap, with a table before him. His stature does not exceed the middle size; his features are rather small and sharp; but his eyes are very expressive, and give great animation to his countenance. He was feeble from a late attack of illness, and his voice incapable of its usual pitch. He received us cordially; and, as the conversation turned upon America, its improvements in arts and knowledge, and its future prospects, his voice and manner acquired greater energy, and he manifested, in the course of an animated conversation, the highest regard for his native country, and the most flattering expectations of its future greatness.

In the drawing-room, adjoining that in which he received us, were a number of pictures, all of the ancient masters. The gallery containing his own collection, occupies a suit of rooms in the lower story of his dwelling-house. It is very extensive, and is open to the inspection and gratification of respectable visitors, without cost, excepting a gratuity to the servant, who is always in attendance, to conduct visitors through, and explain the pictures.

In returning to our lodgings, we went into the bazaar in Soho Square. This is a very extensive suit of rooms, on two floors, (formed by throwing several houses into one,) in which are collected almost every kind of article, which the arts of London, Birmingham, Sheffield, Manchester, &c. can produce, in the way of ingenuity, delicacy, and taste.

They are judiciously exposed to the view and examination of visitors, for the purpose of sale. Each article has its price attached to it, from which there is no abatement. About 200 females are in constant attendance to wait upon visitors, and to receive their money. No person is solicited to buy, nor is any thing said to enhance the value of the goods. This is a new kind of establishment, of which there are, at present, but two in London. The term, as well as the plan, has been imported from India. A new bazaar is building, I am informed, by Lord George Cavendish, which, for splendour and convenience, will surpass any thing of the kind in Europe. In the evening, these shops are all lighted with gas, and present a most brilliant appearance. One side of Soho Square is frequently crowded with the carriages of ladies, and people of fashion, who are visiting the bazaar.

LETTER VI.

London, 6th month (June) 9th, 1818.

I HAVE been spending a few days at the house of a friend, at Walthamstow, six miles from London, the residence of hospitality and taste. It is difficult to conceive of a situation which combines more of the substantial comforts of life with its elegancies and refinements, than the villas and seats of private and independent gentlemen in the neighbourhood of London. Although the country, for many miles around the metropolis, is almost flat, and unvaried by any of the wild luxuriances of nature, yet so numerous and powerful are the resources of art, and so well understood are all the principles of landscape gardening, they contrive to convert a level piece of ground, of a few acres, into a little paradise. By the magic of shrubbery and flowers, canals and fishponds, artificial mounds and grottos, gravelled walks and majestic trees, added to a noble mansion, with its ample range of out-buildings, its walled garden, its well trained fruit trees, and its lawn of brightest verdure, a residence is obtained where the philosopher or the statesman, blessed with temporal prosperity, may retire, and enjoy his "*otium cum dignitate*" in the highest perfection.

In one of my rides with some of the members of my friend's very interesting family, we visited Chingford church, an old, and not a large edifice, of plain Gothic. It is situated on a rising ground, in the centre of its monumental yard, and so entirely covered with ivy, as to render it one of the most picturesque objects which the religious antiquities of this island afford. It has been recently drawn and painted by the pencil of our very ingenious countryman, Leslie. From the hill on which it stands, there is a fine view of the adjacent country, with its villas, fields, and hedges.*

10th. With the intention of calling to pay a visit of respect to our minister at this court, an American acquaintance and myself proceeded to the house of the secretary of legation, who informed us that the minister was preparing to attend the prorogation of parliament, which was to take place in a few hours. As this ceremony was to be attended with great parade, we drove to a situation where we could witness the procession. The public had been previously informed, that the Prince Regent intended, on that day, to prorogue parliament in person, and, what was unusual, to dissolve it immediately. The concourse of people was excessively great. Parliament and Whitehall streets, for a mile, were crowded with coaches, gigs, and people of all descriptions. The carriages of the nobility, and some of the royal dukes, led the procession. Those of the nobility had four horses each, and some of the others six, very richly harnessed, and guided by postillions in full livery; the number of footmen varying according to rank and wealth. Lastly came the state carriage, containing the Prince Regent. It is a huge, massive vehicle, full twice as large as an ordinary coach, almost touching the ground in the middle, covered all over with gold, and ornamented with carved work. It was drawn by eight beautiful cream-coloured horses, superbly caparisoned. Beadles or guards, dressed in a curious livery, walked on each side of the horses and carriage, and others behind, so as to defend the prince from any interruption from the rudeness of the populace. Numerous horsemen were likewise in array on each side, and in every part of the route. The state carriage of the lord mayor, which I have twice seen, is much like that of the royal equipage, equally rich, and equally ugly, except that

* My friend has since sent me a print from this picture.

it does not appear quite so much the worse for time and use. As the ceremony of prorogation was not to occupy much time, notwithstanding the crowd of fashionable ladies and gentry which filled the house of peers; and passages leading to it, we waited at the entrance of St James' Park for the return of the royal procession, placing ourselves at the gate of the horse guards. The whole train passed within a few feet of us, through the gate, into the park; but the Prince sat so far back in his deep carriage, he could not be seen by spectators, without too intrusive an effort; and we did not see him.

There is now in London a company of Seneca Indians, consisting of an old chief and six young warriors, who came to England, in compliance with an engagement made in America, to exhibit themselves before the English populace. They are to be absent one year from home, and are to receive ten dollars each, per month, except the chief, who is to be paid one hundred and sixty dollars. But the bargain is likely to prove unpleasant and unprofitable on both sides. An American Indian is not so great a curiosity here as the contractors had imagined; and as to the exhibition of their customs, their manœuvres are too silly or too unpleasant to gratify any but the lowest class. The Indians are very tired of it, and wish to get home. We found them idling their time away in childish play, in a small upper room in a narrow street. A person has been engaged, by a few benevolent individuals, to attend them as an instructor, and they have made some progress in spelling. A very ingenious and persevering female friend is endeavouring to form a vocabulary of their language, and has succeeded to a considerable extent.*

11th. This morning I visited the British Museum, having previously made some acquaintance with Dr. Leach, the principal director of the department of natural history, and one of the most promising young naturalists at present in England. He had desired me to come on a private day; for three times in the week, the museum is open to the public gratis, and there is usually, on those days, crowds of visitors. On the intermediate days, visitors are excluded, except by

* I have since received from this benevolent individual, a printed copy of her vocabulary of the Seneca language; and also another of the Yaloof, spoken on the coast of Africa. They indicate much taste and talent, exerted in the very laudable desire of promoting the cause of civilization.

private admission. Dr. L. kindly introduced me to the museum, but having to attend an extensive sale of insects, at that hour, he could not, to my regret, go through the apartments with me.

I had probably heard too much of this celebrated collection, to be satisfied with any thing reasonable. I was disappointed with respect both to the *extent* and *variety* of its contents. In the department of natural history, with the exception of *mineralogy* and *conchology*, it is much more deficient than I had expected to find it. This museum owes its origin to the public spirit of that distinguished physician, Sir Hans Sloane, who, by great industry and taste, had made a collection of natural and artificial curiosities, books, and manuscripts, which he stated in his will had cost him upward of £50,000. His will directed that it should be offered to parliament for £20,000, and, if not accepted, that it should then be offered to certain foreign academies named in the will. Parliament granted the amount without hesitation, and thus laid the foundation of this great national establishment. Various other purchases were made by the same authority, especially of books and manuscripts, and the sum of about £10,000 was appropriated to the payment of them, and to the permanent support of the establishment. The direction of it was confided to an incorporated body of trustees, selected from the first characters in the kingdom, for rank, station, and literary fame. The first act of the trustees was to provide a building, for the reception and display of the valuable collection confided to their care. A noble mansion in Great-Russell-street, Bloomsbury, built about the year 1680, by the duke of Montague, by French artists, and in the style of the French palaces, was obtained for the moderate sum of £10,000. The architect was Puget, a native of Marseilles, and an artist of the first emiaence of his time. The grounds occupy an area of seven acres. The museum was first opened in 1759, and since that period, very numerous and important additions have been made to it, by purchase and donation. The most important of these are, extensive collections of manuscripts, pamphlets, and books, by the present king, and his predecessor, George II.—a collection of antiquities chiefly Egyptian, by the present king; in which are two mummies, the finest perhaps in Europe—a collection of Egyptian antiquities, taken from the French in Alexandria in 1801—

the large and very fine collection of antiquities made by Sir William Hamilton, during a long residence at Naples, as British envoy, obtained by a parliamentary grant of £8,400 in 1772—a splendid collection of Greek and Roman statues, busts, and sculptured marbles, formed by Charles Townly, a gentleman of the county of Lancaster, for which parliament granted, in 1805, the sum of £20,000—a collection of manuscripts belonging to the marquis of Lansdown, obtained in 1807, for £4,925—a cabinet of minerals, formed by the late Hon. Charles Greville, purchased by parliament in 1810, for £13,717—the library of Francis Hargrave, Esq. Recorder of Liverpool, for £8,000, 1813, consisting chiefly of law books—an additional Towneleian collection of ancient bronze figures and utensils, of Greek and Roman coins, gems, drawings, &c. in 1814, for £8,200—a series of marble sculptures, dug up at Phigalia in Peloponnesus, purchased by government, and added to the museum, in 1815—a most valuable collection of Grecian Antiquities, formed by the earl of Elgin, ambassador at Constantinople, acquired in 1816, by a vote of parliament, for £35,000, and in the same year a collection of Greek coins, and another of fossils, purchased for the sum of £1430.

Besides the collections made by these munificent appropriations, the trustees, from the funds at their own disposal, have made numerous additions to the general stock in its various departments. The donations of individuals, likewise, have been far from inconsiderable. A collection was bequeathed by one gentleman, of books, coins, prints, minerals, &c. valued at £23,500. Among its benefactors, is Sir Joseph Banks, who has contributed largely, in the curiosities of the South seas, in Icelandic books, manuscripts, &c. He has long been an active and zealous trustee of the institution.

Considerable additions have been made to the original buildings. The principal mansion is two hundred and sixteen feet in length, and fifty-seven in height. The ceilings were painted by La Fosse, whose skill in this kind of decoration was held in high repute. The figures are descriptive of events selected from the heathen mythology. This building, with the two wings and colonnade next the street, forms a quadrangle, which the visitors enter by a large gate in front. The two wings are allotted for the dwellings of the officers.

Of the particular objects of the Museum, it seems scarcely worth while to attempt to describe any, for it would require several pages even to enumerate those which must produce in the mind of every visiter either pleasure or surprise. The minerals, since the addition of the Greville collection, are of such variety and beauty, as to form a truly magnificent cabinet. The polished specimens are uncommonly rich and splend. In zoological collections, it appeared to be comparatively poor. Two camelopards have been lately added, between the two fore legs of one of which I could stand upright, and the top of the head is fifteen feet from the floor. These animals, while standing erect, cannot reach the ground with their mouths. They live mostly upon the leaves and young branches of trees and shrubs. The collection of the dresses, instruments, household divinities, &c. of the islands of the Pacific, is very copious and interesting. The original copy of Magna Charta is still exhibited, but so defaced as to be unintelligible. An engraved fac simile is placed along side of it.

But, it is in the department of antiquities that this museum stands pre-eminent. Since the addition of the Elgin and Phigalian marbles, and more lately those from Egypt, the collection I presume has no equal. The colossal bust of Memnon, just introduced into the rooms, strikes the beholder with astonishment, though it is still prostrate upon the sled on which it was drawn in.

In these rooms are artists of both sexes, exercising their skill, and improving their talents, in drawing and sketching from the objects before them. Several quite young boys and girls manifested great dexterity in this employment; copying, with neatness and accuracy, the figures of mutilated horses, griffins, heroes, &c. with which the rooms are furnished and the walls covered. The Phigalian collection is much admired. It consists of bas-reliefs, representing the battle of the Centaurs and Lapithæ, and the combat between the Greeks and Amazons. They are sculptured on twenty three slabs of marble, and were found in the ruins of the temple of Apollo "Epicurius," on mount Coty lion, near the ancient city of Phigalia, in Arcadia. They are allowed to be the genuine productions of the Phidian school. The Elgin collection was taken from the Parthenon, or temple of Minerva, at Athens. The principal articles of these interesting antiquities are extensive series of sculp-

tures in basso-relievo ; several large statues of admirable workmanship, and various fragments from the same temple. It is generally allowed that Phidias planned the whole of this sculpture, and superintended its execution. A collection of Greek coins, a number of vases, and a set of architectural drawings of various buildings at Athens, also form a part of the Elgin variety.

The very extensive library of this Museum, and the room containing the coins, are not open to visitors without a special order, and I had not time to seek for one.

From the British museum, I went to the Royal Academy of Paintings, in Somerset-house. This academy was instituted in 1768. Sir Joshua Reynolds, was the first president ; and from his superior taste and judgment, as a gentleman and a scholar, as well as from his exalted reputation as an artist, did this institution derive a popularity, and receive an impetus, that have not been diminished under the auspices of its second president, our countryman West ! Is it nothing to the credit of native American talent, that the son of a plain Pennsylvania farmer, who commenced his career as an artist, with chalk and charcoal on the doors of his father's barn, and who did not leave his country, until he had attained the years of complete manhood, should be found in the meridian of life, at the head of the highest school of painting in Great Britain ? If this were the only instance of extraordinary success in this department of the fine arts by native Americans, it would of itself outweigh a host of common objections. But, while the names of Trumbull, Alston, Leslie, Newton, &c. are found among the distinguished contributors to the Royal Academy, other proof need not be required of the talents of our countrymen, in the prosecution of an art, which, under the guidance of correct principles, may, like its sister Poetry, be made conducive to the real interests of humanity.

There are six or seven rooms in this institution open to the inspection of visitors. The annual exhibition commences on the first of May, and the price of admission is one shilling. The number of pieces exhibited, including architectural drawings, is upwards of a thousand ; and the number of contributors about five hundred and fifty. Besides these, there is a model academy, containing a large collection of busts and monumental pieces of sculpture. As I have yet seen very few pictures of the old masters

I shall not at present undertake to describe any of those which may fall under my notice. It would be an easy thing to fill up the pages of a journal, with such descriptions ; but, except in some particular cases, nothing can be less interesting and instructive to the reader, than a dry verbal detail of a specimen of art, intended to please and instruct only through the medium of the eye.

Of the forty Academicians, who constitute the body of this institution, it is remarkable, that there is one, and only one, female. Lectures are delivered to the students of the academy, on anatomy, painting, sculpture, architecture and perspective. Fuseli and Flaxman, the professors of painting and sculpture, are celebrated in their respective departments.

Dr. Stevenson took me to see a collection of colossal statues, and ancient paintings, exhibited in an apartment of the Royal Mews. They are the property of — Day, Esq. who made the collection in Italy, and who possesses great skill in selecting and obtaining such specimens of antiquity, as are most highly valued by artists.

13th. The pleasure of a stranger, in London, is much enhanced by occasional excursions to the neighbouring seats and villages, where, withdrawn from the immediate sphere of their business, and from the bustle of the city, men of cultivated minds enjoy their evenings and days of leisure with their families, and in the agreeable and useful recreations of science. I returned to day from a visit to two of my friends, L. Howard and W. Phillips, at Tottenham, a very pleasant village, five miles from London, where, by the facilities of stage coaches, which pass to and from the city almost every half hour, and the pleasures of an agreeable neighbourhood, they enjoy all the advantages of the “*rus in urbe*.” The former is a chemist and meteorologist. His practical observations in this last branch of physics, are more judicious and important than those of any other observer, whose registers I have seen. His remarks are regularly published in one of the scientific journals, and science is indebted to him for the best, and indeed, the only nomenclature of the clouds, adapted to practical use. He is publishing a work on the climate of London, that will throw much light on this important, but still obscure department of knowledge. Among his instruments is a clock of a curious construction. Besides keeping the time of day, it

carries round, *once in a year*, a large circular plate, upon which is fixed a broad paper circle, accurately ruled for every day of the year, and against this paper, a lead pencil is constantly pressed, marking out a line which shows, at any time during the portion of the year that is elapsed, the exact state of the barometer for every day and hour; hence it is a very accurate self registering weather glass. The pencil moves only by the rise and fall of the mercury in the barometer, the plate being entirely moved by the clock machinery. Only two of these clocks were made by the inventor; one for the king, and that to which I now allude.

W. Philips is well known as a scientific mineralogist. His private cabinet is the neatest, and, as it regards species and varieties, the richest, I have yet seen. His publications on mineralogy and geology are deservedly popular, both in England and America.

After looking at a glass house to-day, I called with a friend, at the shop of Rundle and Bridge, jewellers to the royal family, Ludgate-hill, and we were politely escorted through the rooms of their extensive establishment. It exhibits a greater display of jewels, and upon the whole, I should imagine a greater amount of transferable *property*, than any other house in the whole world. Among the articles of cost and splendour, I may notice particularly the following: a sword which a private gentleman, (rather eccentric if I mistake not,) had ordered for his own wear. The scabbard was of gold, and the hilt studded with diamonds. The cost of it was 4000 guineas. Three cut diamonds in a small morocco case, valued at £50,000. The largest of these was the famous Pigot diamond, which was worth £30,000. The next largest was valued at £15,000; and the third at £5000. A necklace containing 20 diamonds, value £10,000. It is a well known fact, that no species of property whatever, has retained, during a long course of years, so uniform a price as diamonds. The value of them is estimated by a fixed standard, rising in a rapid ratio, according to the weight, or as jewellers express it, the number of carats. Other things were shown us, much in the same rank of costliness and splendour. There stood upon one of the tables, a most elegant and complete model of the mole or battery of Algiers, about two and a half feet in diameter, and of a proportionate height. It was of frosted silver; and by far the most superb piece of plate I ever

beheld. It was a present to Lord Exmouth, from the officers of the squadron which attacked and reduced the fort and town of Algiers. It was intended, we were informed, as the central ornament, of a dinner table!

I went in the evening with Dr. Fearn to the Royal Menagerie at Exeter Change. The wild beasts are arranged around the room in strong cages, which are separated from the spectators by a railing. The exhibition is very interesting. There is, perhaps, no collection of wild animals in the world, which contains a greater variety than this. Two old male lions, with large flowing manes, immediately drew our attention. There is a tranquil majesty in the air and countenance of this sovereign of the forest, which seems to bespeak such a consciousness of supreme dignity, as to produce perfect composure, and even generosity and magnanimity. The lioness has three fine young cubs, as harmless and playful as kittens. It is a mistake, therefore, to suppose, that this animal never produces more than one or two, at a birth. The Bengal tyger, is a beautiful animal, but with an untameable ferocity in his air and motion. We were amused with the laughter of the hyenas, of which there were four in the collection. When tempted by the keeper with food, they break out into a coarse, but very distinct laugh, but with much less of the humorous in it than the terrific. Panthers, leopards, lynxes, porcupines, bears, &c. were in the collection. The gnu, a singular animal from Ethiopia, which has been lately imported, unites the strong head and horns of the buffalo, with the mane, tail, and body of the horse. We were there, intentionally at nine o'clock in the evening, in order to see the animals fed. When the keeper came in, and announced in a loud voice the hour of supper, the violence and roaring were indescribable; and had not the bars of the cages been very strong, some of the company would, probably, have been the victims of their ferocious appetites. There is also a great variety of birds exhibited. The elephant we had not time to see, though tempted by the information, that he was ten feet high, weighed upward of four tons, and consumed daily more than 700lbs. of food and drink.

15th. I have seen to-day the British Gallery of Pictures in Pall Mall. This institution was first opened in 1806. It is patronised by the royal family, and liberally supported by the subscriptions of the nobility and gentry. During one half the year, it is a place of exhibition of the works

of living artists, for sale ; and during the other half, it is filled with pictures from the most celebrated masters, ancient and modern, for the gratification of the public, and the study of pupils. The present is the period of the latter collection. It contained more than 150 pieces ; among the most interesting of which, were two of the cartoons of Raphael, *the gate of the temple*, and *Christ giving the keys to Peter* ; a *Salvator Mundi* by Guido ; and another by Leonardo da Vinci ; the *Good Samaritan*, and *Christ in the Storm*, by Rembrandt ; *market people* by Rubens, and several small pieces by Vandyke, An. Caracci, and Dominichino. The humorous and admirable style of Teniers, Gerard Douw, Jan Steen, and others of the Dutch school, arrested my attention very forcibly. If the true province of a painter, be to seize upon the genuine features of nature, even in her most fugitive and expressive attitudes, and to throw into a single glance of the eye, a complete chapter of the moral history of man, then it appears to me, that the merit of genius of the highest order, belongs unquestionably, to the three last named painters ; whose performances, I should think, must ever command the applause of those who are pleased with the evidences of wit, and truth, and good natured satire, delivered in the most glowing language of the pencil. All the pictures of this exhibition belong to individuals, who have lent them for the purpose. A considerable number of them, are the property of the Prince Regent.

Bullock's Museum, in Oxford street, contains a collection of natural history, and objects of curiosity, that has deservedly ranked for some years, as one of the best of the kind in England. The collection of birds and reptiles, is very fine ; and in zoology I think it excels the British Museum. The skin of the boa constrictor, or great India snake, is thirty-two feet long. In works of art, and curiosities from the South sea, and from Africa, and America, it is very rich.

The *Pantherion* is an exhibition in an adjoining room, intended to display quadrupeds in their natural and appropriate situations, on trees, in the grass, creeping on, or burrowing in the earth, &c. In one orange-tree are disposed sixty species of monkeys. The mineralogical department of this museum contains some remarkably fine specimens. Among them is the most splendid aggregation of

quartz crystals (from Dauphiny) that I have ever seen. This Museum is well arranged ; though, for want of more room, its contents are too much crowded. It did not, upon the whole, appear to me, that the subjects were so neatly prepared and exhibited as those in Scudder's Museum at New-York. According to the catalogue, it contains upwards of thirty thousand different articles.

16th. Dr. Fearn and a friend from New Castle, went with me this morning to the Westminster gas factory. We were politely conducted through the works ; but, excepting their immediate size, and the curious rotary gazo-meter, invented by S. Clegg, there was nothing in them very different from the works at Liverpool and other places. There is probably a greater quantity of gas made here, than at any other factory in England, as the greater part of the very extensive city of Westminster is supplied from this source. The illumination of the streets, shops, and houses by gas, throughout the whole (or nearly so) of the metropolis, is at once an evidence of the great superiority of this kind of light to that from oil. The brilliancy of many of the streets and shops, is surprising, and such as could not be rivalled by oil lamps, without vast expense and trouble. There are three or four large gas establishments in London, managed by companies.

Coal is almost as dear in London, as it was in New-York at the time of my departure, in consequence of the tax imposed upon it by the city, for the purposes of municipal revenue. I shall, probably, have occasion to advert again to this subject.

We took a boat at Westminster bridge, and were rowed down the river to the Tower, where we found an easy admittance, and were escorted through the different apartments of this ancient palace of the sovereigns of England, by a warder, whose curious cap, and large scarlet coat, glittering with lace, more showy than costly, and marked on the back with the letters G. R. gave him an imposing air, which it seemed at first difficult to reconcile with the politeness and humility with which he waited on us, and his readiness to receive whatever we chose to give as a compensation for his services. As the Tower has been well described by other travellers, it need not occupy much of this letter. Its extent within the walls is twelve acres. It is situated near the river, just below the city.

and is surrounded by a fosse, which divides it from the river.; a broad gravelled terrace or wharf lying between the ditch and the river. The entrance to the Tower is by a draw bridge. Within the walls, are numerous buildings, and several paved streets. Excepting the church, the jewel office, and the houses belonging to the officers, the Tower may be considered as a grand arsenal, or deposit of warlike instruments, and a museum of the armorial equipments of the English, in historical succession, from the earliest period in which fire arms were employed. In the horse armory, all the kings of England, from the Conqueror, to George II., are represented on horseback, dressed in the full and appropriate costume of war. The armour of John of Gaunt is seven feet high; and a complete suit, made for Henry VIII., when eighteen years old, is six feet in height. Queen Elizabeth is represented standing beside a cream coloured horse, and dressed in the same armour which she wore in the camp at Tilbury, in 1588. She was a daughter worthy of her sire; and ought, it appears to me, in all those historical representations, to be placed along side of him; while the axe which severed the head of Anne Bullen, which is also exhibited here, should be suspended over the tyrant who commanded it to be used. This room is highly curious and interesting; for whatever ideas we may form from the perusal of history, or from the inspection of prints, the impression is feeble, compared with that which is produced by entering a very large room, where we behold at one view, in figures as large as life, an entire succession of kings on horseback, in the actual dress and armour which belonged to them when alive. Some are completely covered with polished steel from head to feet; others only with breastplates. In the room in which is kept the trophies of the victory over the Spanish armada, a great variety of pikes, axes, and other clumsy instruments of Spanish invention and cruelty, are shown with still repeated triumph. Among others are thumb-screws—instruments of torture, by which the invaders meant to extort the secrets of their hidden treasures from the English. But the room in which the small arms are kept, will, perhaps, surprise the stranger as much as any other. In one apartment, of 345 feet in length, he sees, arranged in the most complete and symmetrical order, and all burnished and kept in perfect condition, arms, for

200,000 men! This, at least, was the information of our guide. Many of them are so adjusted on the walls as to form fanciful and ornamental figures of different kinds. We were admitted also for an additional douceur of a few shillings, into the regalia, or jewel office. This is a small, interior, and dungeon like apartment, illuminated by lamps, in which the crowns and jewels of royalty, worn on public occasions, are shown to visitors, through an iron grate, the bars of which are so close, as effectually to prevent any person from suddenly appropriating to himself any of the glittering treasure exposed to his view. The imperial crown, with which the kings are crowned, is of gold, enriched with diamonds, rubies, emeralds, sapphires, and pearls; within is a cap of purple velvet, lined with white taffety, and turned up with three rows of ermine. It is never used but at coronations, and, of course, has not been taken out since the year 1761. There is another, called *the crown of state*, worn by the King on his meeting the parliament, and on other state occasions. It is extremely rich and splendid. On the top of its cross, is a pearl, valued, in the time of Charles I., at £18,000, and under the cross is an emerald diamond, seven and a half inches in circumference, valued at £100,000. This crown is privately taken to the parliament house, when the Prince Regent attends there, and put *under the throne*, at his right hand. After his coronation it will be put on his head. Two attempts have been made to steal it; one by a Col. Blood; who, in his struggle with the keeper, broke the crown in pieces; and since, in 1815, by a female maniac, who, thrusting her arm through the bars, seized the crown, and tore it in pieces. Nothing, however, was lost, and care has been effectually taken, by altering the bars, to prevent a recurrence of such bold attempts upon the splendour of royalty. Besides the crowns, this office contains several golden sceptres, a globe of gold, an eagle, the diadem worn by Queens Ann and Mary, the crown of the latter, and all the crown jewels worn by princes and princesses at the coronation, and abundance of curious old plate. The value of the precious stones and plate in this office, independently of several of the jewels, is considered as not less than two millions sterling. Among the numerous regalia, is a golden *salicellar of state*, which is placed, at the coronation, on the king's table. It is of the model of one of the

buildings in the Tower. We had not time to see the wild beasts, that are kept here ; but we less regretted it, in consequence of the general acknowledgment, that the collection is inferior to that at Exeter Change.

17th. My excellent friend, W. A., took me to-day to the Borough-road School, where we spent an hour, in observing the operations of this improved and most important method of conveying instruction to the children of the poor. This school is intended as a model for others, both in the construction of the building, and in the management of the classes. I can only say, that we were highly gratified with the indications of neatness, order, and skill, in its appearance and in the performance of the scholars. The Lancasterian principles of instruction, or the art of managing large schools at a very small expense, is evidently gaining ground, not only in England, but in other countries ; and it may doubtless be regarded, as the most valuable practical discovery, in relation to human happiness, with which the world has been recently blessed. Great credit is certainly due to Joseph Lancaster, for the extraordinary ingenuity which he displayed in the mechanism of his system, and the still more extraordinary perseverance with which he urged the adoption of his mode of instruction, throughout the kingdom. Had there been as much discretion in his subsequent procedure, as there was of talent and benevolence in the early part of his career, he might still be entitled to the high eulogium once bestowed upon him by the Prince Regent, that " he was doing more good than any man alive." But, whatever may have been his merits, scarcely less is due to W. Allen, and his deceased coadjutor, Dr. Fox, for their disinterested and noble efforts to preserve the Lancasterian system from sinking beneath the pressure of pecuniary embarrassment, in the early stages of its advancement. The former has long served as treasurer to the British and Foreign School Society ; and to no individual, perhaps, is the general extension of this invaluable system more deeply indebted.

18th. With several acquaintances, I went this morning to St. Paul's Cathedral, to attend the annual ceremony of the assembling of the charity children. Provided, through the kindness of a friend, with a ticket of admission to the manager's pew, I supposed it unnecessary to present myself with the crowd, two or three hours before the time of

meeting. But, although we were on the spot long before the exercises began, it was with difficulty that we could get into the house ; and as to a seat in the pew, it was entirely out of the question ; for it was impossible even to approach it, on account of the amazing press. After remaining some time in the side aisle, I retreated to the very bottom of the audience, and watching a suitable occasion, made a successful effort to climb to the top of the stage, and obtained a position, whence the great body of the children, seated in a large amphitheatre, under the great dome, and nearly the whole of the audience, were in full perspective before me. The sight was truly sublime. The number of persons assembled, varied, according to the estimates of different individuals, from seven to ten thousand. The children were dressed in a simple uniform, with badges, indicative of the particular school to which they were attached. The principal exercises which came within the reach of my ear, were the singing of the children and the sounds of the instruments. When the strains of hallelujah were chanted in full chorus, connected, as they were, with a simultaneous movement of the body, and an elevation of the white aprons of the children, the ceremony was far more impressive than any thing of this nature I had ever witnessed. At the distance at which I was placed, the sounds were full and solemn, and the general movement of such a vast assemblage of children, seated in circles, ascending above each other to a great elevation, produced an effect, to which the imagination alone cannot do justice. The sermon could not be heard distinctly, by half the audience, and indeed it appeared to be but a small part of their concern. The day was warm. Many of the children fainted, from debility and exposure to the corrupted atmosphere of the upper seats ; but they were taken out, and recovered. When the ceremonies were over, they were conducted, in companies, to their respective schools, by the teachers, accompanied by one or more officers, through the throngs, which crowded the streets as they passed, almost to suffocation. The number of children, collected on this occasion, was about 5000.

19th. A portion of this day has been devoted to an inspection of the rooms of the Society of Arts, Manufactures, and Commerce, pleasantly situated in the Adelphi. The secretary of the society, A. Aikin, distinguished by

his valuable publications on chemistry and the arts, was so obliging as to attend us through the rooms. It has long appeared to me, that this society, by its premiums for useful inventions, its publications, and its fine collection of models of machinery, and of various fabricated articles, has greatly contributed to the advancement of the useful arts in Great Britain, and throughout other civilized countries. It was instituted in 1753, and has expended upward of £50,000, in pursuance of its plan for bestowing premiums for useful inventions and discoveries. The funds are principally raised by the voluntary subscriptions of members, and by legacies. The room containing the models afforded us much entertainment. It serves in some measure, as a sort of history of British mechanics. It contains many very interesting specimens of inventive talent; but to particularize them, would require more time than I can at present devote to it; and, indeed, it would be difficult to know where to begin or to end. The great room of the society, is ornamented by a series of very fine pictures, executed by Barry, and intended to illustrate the maxim, "That the attainment of happiness, individual and public, depends on the cultivation of the human faculties." These pictures are considered as ornamental to the capital, and very creditable to the English school of painting. They have certainly been executed with a masterly hand. One of them, however, appears to me to carry the privileges, even of poetic license, beyond its legitimate bounds. It is a representation of "Elysium or the final state of retribution." The painter, instead of making it a paradise of honest and ingenious mechanics,—of men, who have benefited their country and the world, by the extent of their inventions,—of philosophers, whose researches have enlarged the domains of art and civilization; has thrown into his group, a strange medley of kings, statesmen, poets, novel writers, bishops, archbishops, popes, &c. Here is Virgil leaning on the shoulder of Fenelon, and the author of the Night Thoughts associated with the authors of Gulliver's Travels and Yerrick's sentimental journey! Such an Elysium, would not, I should fear, be much to the taste of the Newtons, or the Arkwrights of the present day. The room, which contains them, is forty feet in height, and lighted by a dome.

In returning from this instructive exhibition, we stopped in the Strand, to see a panorama of Athens, painted by Bar-

ker. The executions of this artist, in this style of pictorial description, are deemed of a superior kind. His reputation is high in London, and we were not disappointed. The representations appear so natural and exact, as almost to bring the spectator, in imagination, to the actual spot whence the view was taken. By giving the eye a command of the whole horizon, or entire circle of vision, the illusion and the pleasure are greatly enhanced.

20th. The city has been in commotion for several days, in consequence of the election for members of parliament. London sends four members, and Westminster but two. In the latter, the election is popular; that is, every householder who is an inhabitant of that part of the metropolis, has the right of voting. But in the *city of London*, this privilege is confined to the livery; a body of men chosen by the various incorporated companies of mechanics and tradesmen; such as the linendrapers, fishmongers, brewers, &c. Hence, in a population of more than 200,000, there are seldom more than a few thousand votes taken, even in the most vigorously contested election. Many of the livery men reside in various and distant parts of the kingdom, and it is no uncommon thing for them to be sent for, at the expense of the candidate, whom they signify their inclination to oblige by a vote. On these occasions, they must be waited upon with some ceremony, conducted in a carriage from their homes to the metropolis, live well during the whole of their absence, and be transported back in the same genteel style. To these inducements, a solid compensation must, in some cases, be added, for the value of the time thus employed in discharging one of their privileged functions, as freemen of the great city. The expenses incurred by a single candidate, in a struggle for a seat in parliament, are sometimes enormous. I have been informed that an election in Yorkshire has been known to cost a wealthy nobleman no less than £100,000. If a candidate be a favourite of his party, the expenses of the election are supported by his political friends. The zeal, and bustle, and warmth of a London election, kept up as it is during ten or fifteen days, cannot but afford great amusement to one accustomed only to the quiet and regular procedure of our ballot voting in America. Stage coaches are seen flying through the city, decorated with flags, and large printed labels, indicating the persons in whose service they

are enlisted. These coaches are sometimes filled with men, outside as well as inside, each wearing in his hat, and on his arm, a silk ribbon, or other badge, denoting his favourite candidate. The streets and passages, in the neighbourhood of the election, are generally crowded to excess. Men are employed to carry through the crowd, boards fastened upon poles, and raised above the heads of the multitude, on which are exposed printed papers, containing urgent invitations to the electors to vote for a particular individual. Cards are liberally distributed through the mass of people, for the same purpose. I elbowed my way, to-day, to Guild-Hall, the place of election. Here the crowd and confusion were increased. The large hall is 153 feet long, and 48 broad, and was filled with the populace, in a state of high electioneering excitement. The candidates stood upon a stage, at one extremity of the hall, in their court dresses, while the voters, entering a narrow passage separated by a railing from the open area of the hall, passed up to the stage, exhibited their qualifications, and were asked for whom they voted. They pronounced in an audible voice four names, and then passed on, and made their exit on the other side; receiving the loud thanks and bows of the worthy gentlemen on the stage, whom they had thus distinguished. The elections are all conducted *viva voce*, and in presence of the candidates. When a name was mentioned, by a voter, which was not acceptable to the people in the hall, they manifested their displeasure by groans and hisses, and by calling aloud to the candidate, in terms of ridicule, and not unfrequently of low and vulgar sarcasm. The hall sometimes resounded with these abusive appellations, which were checked by authority only when they amounted to serious and continued interruption. At the conclusion of the poll each day, every candidate makes a speech, congratulating his friends on the prospects of success to their cause, and encouraging them to perseverance; or, if appearances are against them, endeavouring to excite an expectation, that nothing is wanting but increased exertion, to bring them up in the ranks; and concluding with a declaration of the principles by which they mean to be governed in parliament, if successful in the election. The city of London is decidedly anti-ministerial; yet the government, by its agents and influence, has almost uniformly been able to put in one mem-

ber of the four. The ministerial candidate this year, Sir *. *****, is likely, however, to be placed greatly in the rear, if not entirely to lose the election. He is peculiarly the object of popular satire and buffoonery ; but his invincible good nature bears him up against the most pointed and noisy abuse. Should he not succeed, however, it will doubtless be some mortification, as he is a wealthy banker in the city, and has long had the honour of being one of its representatives in parliament. But, if he fail in this election, he will probably be returned from some one of the numerous boroughs of the kingdom, whose votes are of a more manageable character than those of London.

The most popular candidate at this election, as determined, both by the applauses of the hall, and the highest number of votes on the list, is Alderman Wood, who has been twice Lord Mayor of the city.

Upon the whole, I have been surprised to see, in a monarchical government, and in the very eye of the police of London, so much freedom of thought and action, as has been displayed by the people, during this election. There is certainly a remarkable *spirit* of liberty in the great body of the nation, which, if not cherished by the government, is not, as it appears to me, repressed by it, on such occasions as these, any farther than is necessary to public safety and order.

22d. I stayed last night at the house of a friend, at Bromly, about four miles from London. In this village I was shown a distillery, which pays a duty to government of £8000 *per week* ! What should we think of this, in our free country, where the government has scarcely the courage to lay a tax on distilled spirits, which affords any considerable additions to the revenue. We are, of course, one of the most *drinking* people on earth ; and the effects of it, as a national habit, are but too apparent—especially in our villages and cities.

“ War its thousands slays ;
Peace its ten thousands. In the embattled plain,
Tho’ death exults, and claps his raven wings,
Yet reigns he not even there so absolute,
So merciless, as in yon frantic scenes
Of midnight revel and tumultuous mirth,
Where in th’ intoxicating draught conceal’d,
Or couch’d beneath the glance of lawless love,
He ‘ snares the simple youth.’ ”

We went this morning to the West and East India docks. They are situated at the northern extremity of the Isle of

Docks, and are nearly half a mile from each other. They are each double—a dock for unloading inwards, and another for loading outwards. The largest of the East India docks, contains twelve acres and three quarters, and the largest of the West India, thirty acres. The whole of the excavations must exceed eighty acres. They are lined, on two sides, by a row of immense warehouses, and the whole is encompassed by a high wall. The facilities they afford to the East and West India trade, must be incalculable. We went on board one of the largest of the East India Company's ships. Its prodigious capacity, the great extent and elegant arrangement and furniture of the cabins, and the order and neatness of the whole, excite one's admiration. The officers' cabin is on a level with the upper deck.

I visited this afternoon, the Surry Institution, situated at the south end of Blackfriar's bridge. The building was formerly occupied as the Leverian Museum; but about ten years ago it was fitted up for literary and scientific purposes, by a company of proprietors, who pay thirty guineas for each share. It includes an extensive library and reading room, a tolerably good collection of philosophical apparatus, and arrangements for lectures on different branches of science. The number of proprietors is limited to 700.

I spent the evening with J. Sowerby, the naturalist, at his house in Lambeth Place, and was much gratified in seeing his museum of natural history. It comprehends a fine collection of minerals, shells, organic remains, insects, reptiles, birds, with various animals and plants, collected and arranged with industry and judgment, and rendered subservient to the promotion of natural knowledge, by the very numerous and elegant graphical descriptions, of which this gentleman has long been known as the author and publisher. I could wish that those publications were more common in the United States; but there are not yet amongst us, sufficient wealth and taste, to encourage to any great extent, works, which, requiring the nicest skill of the draughtsman and engraver, are, necessarily, of costly execution. We have had, indeed, in one interesting department of natural history, a work which would do credit to any country and any age, and it received among us, a merited share of patronage. I allude, as you will easily perceive, to the ornithology of Wilson. But though the birds of our country, have thus been delightfully described, its quadrupeds, its

insects, its plants, and its minerals, have not been the subjects of much delineation, except by foreign artists.*

23d. With two or three friends, I went to-day through the Isle of Dogs, to Greenwich. This island, about four miles below the city, is formed by a large bend of the Thames, and a canal, which opens at each bend into the West India docks. It is perfectly flat, and is well cultivated in farms and pasture grounds. It is seven feet lower than high water mark, and is secured from the tide, by dykes or embankments. In digging this canal, some years ago, a subterranean forest, containing hazels and other trees, was discovered, under the bed of mud that formed the surface of the peninsula. This proves, very clearly, that in the Thames, as well as in our larger American rivers, the alluvium brought down by the stream is continually raising the bed of the river, and increasing the quantity of fertile soil upon its borders.

We crossed the river at a ferry, and directed our first attention to the Greenwich Hospital, that famous asylum for wounded and disabled seamen. The buildings of which this establishment consists, make a noble appearance when viewed from the river. They are separated from the water by a spacious terrace, and have in front an open area, with a statue of George II. in the centre. A Doric colonnade, twenty feet high, with an entablature and balustrade surrounds all that part which is seen from the terrace or river. We were first shown the chapel, which, with its ornaments, are considered as very creditable to the fine arts of the country. It is entered by a flight of fourteen steps, through a portal, with large folding doors of mahogany. It is capable of containing 1000 pensioners, exclusive of seats for the officers. Over the altar, is a painting, by West, of the escape of St. Paul from shipwreck in the island of Malta. A painting of the Ascension, designed by the same artist, in *chiaro-oscuro*, forms the last of a series of the life of our Saviour, which surrounds the chapel. It contains various other paintings, and several statues of angels as large as life, by Bacon. Under a large dome of one of the four principal buildings, is a hall of the

* There is at present in the United States, a laudable and increasing attention to natural history. The American Journal of Science, and the Journals of the Academy of Natural Science of Philadelphia, and of the Lyceum of New-York, are beginning to supply the deficiency alluded to in the text.

same size as the chapel, the ceiling of which was painted by Sir J. Thornhill. This hospital is praised by the English, (with what justice I cannot say,) as the most superb and beautiful edifice in the world, applied to a charitable use. The establishment contains 2410 pensioners, 149 nurses, and 3000 outpensioners. Those in the house, besides their maintenance, are allowed from 1s. to 2s. 6d. per week, for pocket money. We were conducted through the dining hall, just as they had arranged themselves for dinner. The spectacle of a thousand or more old tars, many of whom were obliged to lay aside their crutches, and feed themselves with one hand for want of another, was rather imposing; and could hardly fail to awaken sensations of renewed horror at the reflection, that, between Christian nations, a practice should still prevail, which throws upon the community so great a number of their fellow-creatures, in a maimed, disfigured, and helpless condition. We had before us, indeed, a consoling evidence of the application of Christian feelings, in alleviating the evils of antichristian customs. A school is connected with the hospital, capable of containing 200 boys; besides which, there is, in the park, a naval asylum, on an extensive scale, which provides for the education of 3000 children of seamen. When of a proper age, the boys are sent to sea, if this be not opposed to their own inclinations; and the girls are apprenticed to service.

From the hospital we proceeded to the Royal Observatory, and were introduced to J. Pond, Esq. the astronomer, and his family. The position of this building is very fine. It stands on a beautiful, and very considerable eminence, in the park, and commands a most extensive horizon; the country around being remarkably level. We were escorted through the various rooms containing the apparatus. From the number, size, and fine adjustment of the instruments, and the care and judgment with which they are constantly applied to the passing phenomena of the heavens, this observatory ought, doubtless, to be placed at the head of those institutions which furnish data for the calculations of the nautical almanac; upon the perfection of which, the safety of navigation so essentially depends. To this great end, the labours of the former astronomer royal, appear to have been chiefly directed. But the science of astronomy has not been so much enriched by discovery from this insti-

tution, as the convenience of its position, and the perfection of its equipment, would authorise one to expect. It is admitted, I believe, generally, that nautical astronomy does not, at present, derive much benefit from the Royal Observatory. This defect is not attributed to any neglect on the part of the present incumbent, as no provision has been made to engage his attention to that special service. But, as it has been the subject of just complaint, that the nautical almanac has, for some time past, been extremely defective, it would really seem to be the appropriate concern of the most expensive and richly endowed astronomical establishment in the kingdom, to superintend a work so intimately connected with the success of British navigation.

The magnetic instruments are kept in the garden, nicely insulated from the effects of disturbing causes. The present variation of the needle is $24^{\circ} 30'$ west, and stationary. On the top of one of the turrets, is a superb *camera obscura*, which produces upon a table of white plaster or stucco, an elegant miniature picture of the various interesting objects surrounding the observatory. This was very politely shown us, and its effects agreeably exhibited, by the wife of the astronomer. The waving foliage of majestic trees, the deer grazing in the park, the river whitened with sails, and all the varieties of a most luxuriant landscape, were suddenly thrown before us in a living picture, upon a table in a dark room, where a moment before, all was blank and colourless.

25th. With one of my London acquaintance, I visited this morning some of the charitable institutions on the south side of the river. Our first object was the asylum for the "Deaf and Dumb." It happened to be the period of vacation, and but a small proportion of the pupils were in the house. We were, however, kindly received by Dr. Watson, who has long been at the head of this establishment; and whose intelligent efforts to promote the welfare of the unfortunate subjects of his daily care, have received the plaudits of the society and the public. The house is large and convenient. Several of the pupils were exercised before us, and they furnished decisive evidence, that the power of speech and articulation, sufficiently distinct to be understood, as well as the ability to comprehend, from the motion of the lips, what others say, may be conferred upon them by instruction. To whatever perfection the language

of signs may be brought, it is impossible that a stranger should converse with a deaf and dumb person, in any way so easy, and with so little effort to himself, as by the motion of the lips : and as the intellectual improvement of this class of pupils, so essentially depends upon the ideas communicated by others, it appears to me important that they should be thoroughly practised in this easy mode of conducting a conversation. I once knew an interesting female, entirely deaf, with whom I could sit and converse with so much ease, that a stranger would not discover, excepting from the peculiar intonation of her voice, that there was any thing unusual in the conversation. She had entirely lost her hearing, if I recollect rightly, about the age of nineteen. Articulation was, of course, more easy to her, than to one who had practised it only by the aid of mechanical instruction. But the facility with which she acquired the power of comprehending from the motion of the lips, was such, that in a place of worship, she could comprehend nearly the whole of a sermon, from the inaudible repetition of it by the lips of a friend who sat near her. In the mode of teaching the deaf and dumb, adopted by the Abbé Sicard, and now practised in America, articulation and the language of the lips, are, I believe, entirely discarded. I have not been able, however, to discover the wisdom of obliging every person who would wish to converse with one who is deaf and dumb, to learn to spell words with his fingers, or to write at full length all that he wishes to say : much of the pleasure and profit of conversation must be excluded from so circuitous and troublesome a procedure.

This highly useful charity is under the direction of a society of which the duke of Gloucester is president.

The school for the indigent blind is situated near that of the deaf and dumb. The pupils are here taught, as in Liverpool, such useful arts as will enable them either wholly or in part to support themselves. They are retained in the school no longer than is sufficient to become skilful in the employments assigned them. Basket and rope making are practised with great advantage. In one room, in which a great number of women were spinning, they began, from a hint given to them by my companion, to sing together in concert, and in a strain of no unfeeling harmony. To see so many blind and indigent human beings singing at their

work, and with countenances expressive of content, was to me novel and affecting. This extensive school is supported by donations and annual subscriptions.

I am not aware that any attempts have been made in the United States to establish schools for this class of the poor, so deserving of the sympathy and kindness of their fellow-creatures. A prosperous commencement has been made with the deaf and dumb. The blind, it is to be hoped, will not long be forgotten.

Our attention was next directed to the buildings and work shops of the Philanthropic Society. With this establishment every friend to humanity, who visits it, must be highly pleased. The plan of it was first suggested to the public by Robert Young, Esq. Dr. Sims, the learned president of the Medical Society, was its first chairman and vice president. Its great object is to afford an asylum to the children of convicts, and those who are trained to vicious courses, public plunder, infamy, and ruin. It is the peculiar distinction of this society, that they seek for children in the nurseries of vice and iniquity, in order to draw them away from farther contamination, and to bring them up to the useful purposes of life. Prisons, bridewells, and courts of justice, afford materials upon which this society displays its bounty. They are seldom taken younger than eight or nine, or older than twelve. Within the buildings of the society, are more than sixty different wards. The apartments of the girls are separated from those of the boys by a high wall, which prevents all intercourse. The boys receive a sufficient share of school learning, and are placed, on their admission, in one of the various manufactories or work shops, which are conducted by master workmen and journeymen. The principal trades pursued, are printing, copper-plate printing, bookbinding, shoemaking, tailoring, ropemaking, and twine spinning. A portion of each boy's earnings goes to his credit, and is given to him at his discharge. Besides receiving those poor juvenile offenders into their establishment, the committee have adopted the plan of apprenticing out some of the best behaved boys, to tradesmen of good character, with a sufficient premium; but they are still considered as under the care of the society. The girls make their own clothing, and shirts for the boys; wash and mend for the manufactory; and, in short, are educated so as to qualify them for useful and respectable

service. About one hundred and fifty boys are within the walls, and more than fifty girls. The society has a house, in another part of the town, called the Reform, where the most hardened offenders are first introduced, and where they are carefully instructed in the obligations of morality and religion, and in school learning. When out of school, they are here employed in picking oakum. In passing through the workshops of this beneficent institution, where industry and skill were apparent, it was cheering to find that so many wretched children were "snatched as brands" from criminality and ruin, and restored to the prospects of respectable and honourable life. The chapel of the establishment is remarkable for its neatness. It serves for a considerable auditory, in addition to that of the institution.

Taking a boat at Vauxhall bridge, we proceeded up the river to Chelsea, and looked into the large hospital there. This is a royal establishment for invalid soldiers, as that of Greenwich is for seamen. The whole front of the building is 804 feet, and it forms, next the river, three sides of a hollow square. The hospital, with the gardens, (which are laid out in a stiff, bad taste,) covers about forty acres of ground. The rooms of the house contain 500 persons; but the number of out-door pensioners is no less than 50,000! What a tax is this upon martial glory! and what, to an independent and honest mind, is a daily ration of soup and potatoes, in comparison with the loss of a leg or arm; or a constitution physically and morally diseased! How incalculable are the mischiefs and miseries of war, the deepest of all stains upon the history of *Christians*! The out-door pensioners reside mostly in the town of Chelsea; and its appearances are such as might be supposed to result from such a population,—the reverse of cleanliness and comfort.

We stopped, on our return, at the rooms of Chantry, the sculptor, who, at present, as an artist, stands unrivalled in Great Britain. His performances are, indeed, exquisitely fine. He is allowed, if I mistake not, to equal any of his predecessors in England, in the delicacy and beauty of his execution, if not in the spirit and poetry of his design. One of the pieces which we saw in the shop, a single statue, was to cost the gentleman who bespoke it, 5000 guineas; and another, of rather more labour, was agreed for at £7000. Chantry has risen, I am informed.

to this pinnacle of distinction in his profession, solely by the efforts of native genius. He was originally a poor country lad, in the neighbourhood of Sheffield, whose occupation was to drive an ass to the town with buckets of milk. Having evinced a turn for sketching and carving, he was patronised by a liberal-minded individual, so far as to be placed in a situation where he received some instruction ; and having reached London, he rapidly rose to the eminence he now holds.

In passing through Leicester-square, we visited the celebrated Linwood collection of pictures in worsted. There are in the different rooms, upward of sixty pieces, all, or nearly all, executed by the needle of this indefatigable female artist. They consist of imitations of pictures, selected from the works of different masters, by variously coloured threads of worsted. The resemblance to painting is so exact, that very few persons, at the distance of a few feet, could make the distinction. The brightness of the colours is admirably preserved. In the selection of pictures for imitation, this lady has shown great delicacy of taste and judgment ; and the surprising degree of patience and industry, as well as skill, which the collection displays, must afford no ordinary share of pleasure to every visiter. She was once offered, it is said, 3000 guineas for a single piece,—a copy of the Salvator Mundi, of Carlo Dolci.

26th. I was conducted this morning, by a gentleman of considerable celebrity in the chemical world, through the London Institution. An elegant stone building has been erected by this society, in an open and agreeable situation in Moorfields. It contains an admirable arrangement of lecture and reading rooms, now nearly completed. The collection of apparatus is extensive and costly ; and the library, ninety-seven feet by forty-two, with a gallery on each side, contains a valuable and well selected variety of books. The lectures have not yet commenced. This institution is supported by donations, and funds raised by a subscription stock. It corresponds in its objects with the Royal Institution in Westminster, and bids fair to rival it in popularity and usefulness ; though it must be long before it can send forth to the world a series of discoveries, equally brilliant and important to science, as those which were made in the latter institution by Sir Humphrey Davy.

I gladly accepted an invitation of two of my friends, both fellows of the R. S., to go with them to-day, to a meeting of a committee of the society, which assembles annually at the Royal Observatory at Greenwich, for the purpose of inspecting the instruments at that place, and reporting upon their condition. We met there about thirty persons, comprehending the most active and learned members of that body. Among them were Sir Joseph Banks, Earl Morton, Dr. Wollaston, Dr. Herschel, James Watt, Dr. Young, Sir E. Home, W. Allen, W. H. Pepys, C. Hatchett, W. Brande, Sir H. Englefield, Sir B. Hobhouse, and several other distinguished members of the society, with a few other persons of note in the republic of science. After proceeding through the several apartments of the observatory, and examining the instruments, the company adjourned to an inn on the banks of the river, and partook of an excellent dinner. The graver features of philosophy were softened into the ease of social familiarity, and conversation flowed without restraint. It was a union of men of the highest order of intellectual acquirements, and under circumstances favourable to the free indulgence of social sympathies. It would be impossible, perhaps, to assemble an equal number of men, of any one nation, in which should be comprised a greater amount of profound knowledge in every department of science and learning. The conversation naturally turned upon subjects relative to the arts. Rennie, the celebrated engineer, happened to sit near me at table, and by his intelligent and instructive conversation, increased the respect which his tall, fine figure is calculated to inspire. He was inquisitive with respect to the arts in America, and appeared to be influenced by a candid and liberal judgment. The various public works, at present under the direction of this great engineer, involve an expenditure, it was told, of not less than £6,000,000 sterling!

From the age and growing infirmities of the President of the Royal Society, it is scarcely probable that he will again officiate on this annual occasion. I know not whether it was a sentiment of this kind, which induced the committee to propose his health at the table, and to drink it standing, with nine cheers. He endeavoured, with great modesty and firmness, but ineffectually, to prevent it; and afterward jocosely said, that he feared the Royal Society

was going crazy.* The noise of this cheering, and of the general hilarity subsequent to it, did not, perhaps, exactly comport with the character of this learned society, and certainly formed a curious contrast with the grave formality of their meetings in Somerset House.

27th. After an agreeable call this morning on R. Rush, Esq, our minister at this court, I rambled through Bond-street; formerly celebrated as a lounge for those fashionable idlers, whose object is to display their figures, and to derive an ephemeral consequence from the skill of their tailors. There is nothing at present in this street, except the glitter of the shops, that can render it desirable as a public promenade. It is greatly inferior to Broad-way, in New-York, in width and pleasantness, and has ceased to equal it in fashionable and luxurious display.

In the neighbourhood of this street is Dubourg's exhibition of models of the most celebrated remains of ancient amphitheatres, temples, mausoleums, catacombs, &c. in Rome, Naples, Verona, and the south of France. They are executed in cork, and are admitted to possess great merit in point of fidelity. The proprietor is a Frenchman, who travelled through the south of Europe for the purpose of copying these celebrated remains of Roman antiquity. He has long been established in London; and whoever visits the collection without being conducted through it by the owner himself, will lose no inconsiderable part of the gratification.

I called to-day, with a letter of introduction, on P. Colquhoun, the celebrated police magistrate, and writer upon the police of London, &c. He is advanced in years, and too feeble for much bodily exertion, but is still active at his books and his desk. We had an interesting conversation on the poor laws, and on the best system of administering relief. He condemns the present course of this country in relation to the poor, as ruinous both to its morals and its finances.†

28th. I dined to-day at the country seat of S. Gurney, about four miles from London. He occupies the house of the late Dr. Fothergill, a plain, but large and genteel man-

* On adverting to the circumstances of this meeting, at Sir Joseph Banks', six or eight months afterward, he told me that the noise of the dining room occasioned the people about the inn to inquire what company it was, and that they were answered by some persons who pretended to be very knowing, that it was the *Royal Insurance Company*.

† This worthy magistrate is since deceased.

mon, in the centre of a considerable domain, entirely enclosed by a high wall of masonry. The grounds are quite level; but so variegated with lawns, gardens, shrubbery, trees, and fishponds, as to furnish, with the conservatory and other buildings, a tasteful and agreeable residence.

I staid last night at the country house of J. F. whose wife, Elizabeth Fry, has so nobly distinguished herself in the cause of humanity. The reformation she has produced in a company of the most profligate and abandoned class of human beings, (the female prisoners in Newgate,) has given her a distinction and celebrity which will descend with the brightest lustre to posterity. I had several times seen her prior to this visit, but only with a partial opportunity of estimating her character and worth. Her manners partake in a slight degree of the formality of one who perceives that she is treading in a new, and in some degree, an untried path. But impressed with a full consciousness of the vast importance of the principles of benevolence which she has undertaken to establish, and relying with entire confidence on the correctness of those principles, and on the spirit and motives which animate her in the discharge of those high and solemn duties, she moves on with a blended dignity and sweetness,—a loftiness of purpose, and a Christian meekness combined, which I have rarely, if ever, seen equalled in man or woman. The success and the fame of her efforts, have attracted around her a numerous circle of the highest orders of society, in rank and influence, who are desirous of her acquaintance, and of an introduction by her to those apartments in the prison in which the effects of her labours are so conspicuous. The universal plaudits of her numerous and titled visitors and acquaintance, have no effect upon the simple and plain habits of the "*Friend*;" and divert her not from pursuing, with patience and mildness, the enlightened path which her conscience approves. She appears to understand too well the emptiness of wordly adulation, to allow it to influence her affections, and to draw her mind and heart from that humility and dedication, which are the real basis of her success and usefulness. She is a preacher in the society of which she is a member. I have several times heard her, and always to my satisfaction. She has nine children, and performs toward them the duties of a most affectionate and enlightened parent. The secret of her government at home, as well as in her sphere

of benefactress to the wretched outcasts of society, is Christian love. Their situation in the country is pleasant. They have a good house, finely cultivated grounds, a grove with winding gravelled walks, a fruit garden, &c. ; but her services in the city require her residence in town, during much of the year. Her person is tall and dignified. Her physiognomy, open and intelligent ; and, though it would not be accounted handsome, it is by no means the reverse. There is an expression of grace and kindness in it, which more than compensates for the absence of personal beauty.

29th. After an agreeable conversation with my excellent friend on the subject of prisons, and the various means of improving the condition of the poor ; I accompanied her this morning on her way to town, as far as Stratford, where I stopped to visit a chemical laboratory, upon an extensive scale, for manufacturing purposes. The large vessels are heated by steam, which circulates through pipes inserted in them. The preparation of jelly, from bones, was interesting and curious. The bones are brought to the laboratory at two shillings per bushel. They are boiled and distilled, by which they yield oil, ammonia, and other products. When treated with muriatic acid, the lime is dissolved, and the remaining mass is principally jelly, of a nutritious quality, and valuable for soups and other purposes. The distilled bones are ground and converted into ivory black.

After dinner, my friend L. Howard accompanied me to Coade & Sealy's gallery of artificial marble, on the south side of the river. The productions of this manufactory are surprisingly beautiful. Pillars, columns, busts, statues, pedestals, monuments, &c. are made in the most perfect and delicate imitation of the various kinds of marble, granite, and other species of rock used in ornamental building. The material is a composition, which, when moulded into the desired form, and baked, becomes harder than stone. I have noticed large pillars of this composition in some of the public buildings, and had at first a difficulty in believing they could be any other than the most elegant and finely polished marble, until convinced of the contrary by the touch and sound.

Repassing the river by that new and superb structure, the Waterloo or Strand bridge, we gained admittance to the printing establishment of Bensley & Son, where we wit-

nessed the power of steam, applied with singular acuteness, and ingenuity, to the process of printing books. Not only is the paper adjusted to the types, and the types pressed against the paper, by mechanism kept in motion by the engine ; but the ink itself, when once put into a trough, and placed over the types, is spread with certainty, and in the precise quantity required. Surprising as it may appear, 900 sheets, we were informed, are printed on *both sides* in one hour, by a single press of this construction, and moved by the steam engine.

7th month (July) 2d. Having spent several days with my friends in the country, I came to London this morning, and attended a meeting of the British and Foreign School Society, held at Free-Masons' tavern, Great-Queen-street, Long Acre. In the managers' room, prior to the chair's being taken in the large hall, I had an opportunity of seeing the duke of Sussex, more in private than on the preceding occasion. He spoke with much affability to those to whom he was introduced. With Professor Pictet, of Geneva, who was present, he conversed fluently in French. The audience was large and respectable. The duke presided, and addressed the meeting several times, with much force and point. An animated and eloquent speech was made by Wilberforce, in which he adverted to the natural ties between England and America, in terms which were honourable to him, both as a statesman and a Christian. A French gentleman delivered a speech in broken English ; but so appropriate, and with so much unaffected candour, as to render even his blunders amusing and interesting. The audience appeared to take a deep interest in the important objects of the society ; and every pertinent allusion to the magnitude of its concerns, on the part of the speakers, appeared to excite the liveliest sensations.

3d. I had the pleasure, this morning, of visiting Newgate prison, at the invitation of Elisabeth Fry. A number of strangers, among whom were several foreigners, were also present. The prisoners, upon our being admitted by the turnkey, were as quiet and orderly as are the labourers in a common manufactory. Habituated to the entrance of strangers, almost daily, since the late reform, they are no longer disturbed by it, but attend to their duties without much interruption. In one small apartment, a school was kept by one of the prisoners, in which a number of children, whose mothers were within the walls for various

crimes, were taught to spell and read. There was a modest diffidence in the air of their young mistress, which could hardly fail to excite the sympathy of every visiter. The prisoners are provided with work, according to their capacity, consisting principally of knitting and sewing. Various articles of men and women's wear, bed-quilts, pin-cushions, &c. very neatly made by them, are kept for sale, and find a ready market in the company, whom humanity and curiosity attract to the prison.

At an appointed hour, the women were collected in one room, and after being quietly seated, and remaining for a few minutes in stillness, their excellent benefactress opened the Bible, and read to them one or two chapters, judiciously selected for the occasion. The tone of her voice, her enunciation and emphasis, particularly when she reads the Scriptures, are so peculiarly impressive, as to command the attention of all her auditors. Many persons of taste and learning, who have witnessed her exercises on these occasions, have acknowledged, I have been told, that they had never heard the Bible so well read before. She frequently comments upon the passages she has read, with a feeling which gains the whole attention of the wretched class which she addresses. Her exhortations, though pointed and close, are clothed in such a spirit of love, as to subdue the obduracy of those hardened offenders; many of whom, in all probability, had never heard the language of Christian kindness addressed to them before. Their demeanour, while thus collected, had nothing of that almost ferocious boldness, and contempt for every thing serious, which marked their conduct when this humane enterprise was first undertaken. There was a mixture of shame, sorrow, and reserve, in their countenances, which proved that better feelings had taken possession of their minds. The keepers of the prison speak of the reformation with astonishment; and every visiter retires with admiration, at the proof which this eminent example affords, of the benign and resistless efficacy of the Gospel spirit, over the most corrupt passions and habits of human nature.*

4th. In the course of a walk to-day, through Southwark and Westminster, I went to Covent Garden, and elbowed my way, but not without difficulty and some danger, through

* A number of females have united themselves with Elisabeth Fry, in this benevolent work, and, by their judicious and devoted efforts, have greatly contributed to that reform, which commands the admiration of every visiter.

the dense crowd there assembled on account of the election of members of parliament. As there is a larger space here for the mob to assemble in, than at Guildhall, the multitude is much more numerous, and, if possible, more turbulent. The hustings is a rough stage or scaffold, temporarily erected, for the candidates to display themselves upon. From this they make their bows and speeches to the polite audience below, and receive, in return, the most vociferous applauses from one party, and from the other, such simple testimonials as dirt, sticks, and stones, thrown at them in ample profusion. Sir M. M. one of the candidates, received from one of these missiles, a wound which confined him to his house, and had like to have been attended with serious consequences. Vast sums of money are expended in courting the favour of this unruly populace. Committees, engaged in support of the different candidates, have each their insignia at the windows of the houses in which they sit. These houses are besieged by the crowd; and it is sometimes dangerous, in case the candidate is very unpopular, for the committee, or their friends, to expose themselves at the windows, or in the streets. Very few indeed, of the thousands assembled to-day, appeared to have any other motive for leaving their homes and business, than the gratification of an idle curiosity. Composed of the lowest orders, and met for no rational object, they appeared ripe for mischief; and I could not but look upon this numerous throng, as containing the elements of discord and revolution; and, like a fermenting mixture in a brewer's tub, restrained only by the firm and powerful bands which encircle it.

In pushing through this crowd, as well as in moving with the dense currents, which are to be encountered in many of the streets, I have been attentive to my pockets, and have thus far escaped the artifices of the light fingered gentry, that are said to frequent this city in great numbers. Nor have I experienced any serious difficulty, in my numerous rambles through all parts of the metropolis, from sharpers or ill disposed persons of any kind. Having generally taken the precaution to carry a map of the city in my pocket, I have seldom been interrupted in my visits, by the irregularity of the streets. There are two great thoroughfares, from west to east, through the town; which, when understood, greatly facilitate a stranger's progress through all the collateral and adjacent streets and squares, while the great dome of St. Paul's, towering over all other buildings,

serves as a beacon from almost every part of this vast forest of houses and steeples. The hackney coaches amount, in number, to 1200, but not much can be said in their favour, in point of cleanliness ; nor are their horses by any means so well conditioned, or so good, as those in New-York. These coaches are stationed in the middle of the street : when called to the foot pavement, a person in attendance, styled the waterman, opens the door, and takes the passenger's direction where to go. This person brings water to the horses while on the stand, (whence his title,) and by his attentions, renders it unnecessary for the driver to leave his seat. He expects to receive a small *douceur* from the passenger, but, being under the pay of the coachman, he is not pertinacious in his demands,—a halfpenny satisfies him. The fare of the coaches is fixed by law : but, unless a stranger is well acquainted with the rates, he is liable to gross imposition. The fare is the same for four persons as for one. In addition to the hackney coaches, as public conveyances, there are about 3000 wherries or boats, plying on the Thames for hire. The fare of these is also fixed by law, and is very moderate ; and when the weather is pleasant, this is the most agreeable way of passing from one end of the town to the other.

London is much better paved than any of our cities. The foot walks are of broad smooth flags, and those of the streets are large squared stones, well fitted, and inserted to a considerable depth in the ground. By this means they make a closer, firmer, smoother, and much more durable pavement than it is possible to produce by water worn stones or pebbles.

The number of mendicants in the streets of London, is not so great, nor are they so importunate as I had anticipated. There is, it is true, a much greater number of miserable looking objects, and of those who plead for charity, than are to be found in our cities. But with respect to another class of intruders, who commence their walks in the early part of the evening, and continue them beyond the midnight hour ; who force themselves upon the notice of those they meet, and especially of strangers, the number is truly appalling. I had scarcely a suspicion, that such an extent of female degradation was to be found in any part of the civilized world, as that which every stranger is of necessity convinced of, by a walk in the evening, through any of the most frequented streets of London.

That this mighty evil, which is thus suffered to extend itself, like a moral pestilence, through the community, concealing, under the most seductive blandishments, all the bitterness of sin and death,—an evil which nightly allures to almost irremediable depravity and wretchedness, hundreds of innocent victims—is entirely out of the reach of police regulation and prevention, I cannot yet believe. Every precept of religion, and every principle of humanity, conspire to urge the suppression of a licentiousness so fraught with ruin to the character and happiness of society.

From the numerous swindlers that are said to infest the streets, in the shape of gentlemen, or well dressed servants, it is unadvisable to ask for directions of any person in the streets. At least it is much the safer way to step into a shop, to make the inquiry, where one is almost certain of receiving a very particular and polite explanation of all that we wish to know.

The shops make a splendid appearance. In no city that I have ever been in, do they present so much attraction and amusement to the passenger, as in London. Whatever may be their contents, whether dry goods, hardware, candles, books, trunks, or any thing else, they are arranged in the most tasteful and fanciful forms that ingenuity can devise. In some confined streets, and even narrow courts or passages, one meets often with a succession of these fancy shops ; and a person must be destitute of common curiosity, not to find amusement for hours, in looking at the almost endless variety of highly finished articles displayed before him ; and yet, if he pause long to look, he will, in all probability, soon be recognized as a stranger, and be subjected to the sly or the polite notice of some one, whose motives have quite as much of selfishness in them as of kindness or civility. The brilliancy of the gas lights, both in the shops and in the street lamps, greatly increases the effect of this display, and equally enhances the pleasure of the dealer and the customer.

The general salubrity of London is very much promoted by the plentiful supply of water which every part of the town enjoys. This is derived from various sources. 1st. Advantage is taken of the rapidity of the tide at London bridge, by the erection of five large water wheels, which, during both the influx and efflux, move a number of forcing pumps, which raise the water to large and high reservoirs, whence a considerable part of the city is well supplied. The

wheels are occasionally assisted by an air pump. 2dly. By the New River. This is a canal, completed in 1613, by Sir Hugh Middleton, by which good water is brought, upon an entire level, from near Ware, a distance of twenty miles. The river with all its windings, is thirty-nine miles long, and is crossed by 215 bridges. It terminates in a large basin, called the New River Head, whence it is conveyed by sluices into several large brick cisterns, and from these, through large pipes, to the several districts. It supplies about 50,000 houses, by means of leaden pipes, of half an inch bore. Sir Hugh Middleton was an enterprising goldsmith, of London. After projecting the plan of this very important aqueduct, and meeting with no co-operation, he resolved to undertake it himself. But having exhausted all his resources, and being refused aid from the corporation of London, the work might have been abandoned, had not the king (James I.) come forward to assist him. 3dly. The springs of water, or wells.

The general substratum of London, and its vicinity, is a bluish or blackish clay, very tough, and so extremely dense as to be almost impervious to water. It is called, by the geologists, London clay. It forms the superior stratum of an extensive chalk basin, except where it is covered by alluvial sand, gravel, and loam. This clay rests immediately upon the chalk; the lower portion of it, being mixed with sand, and of a more plastic nature, is called the plastic clay formation. Very few springs issue immediately from the London clay; and, whenever they are found, the water is impure, on account of the pyrites, and other salts, which it contains. But, in consequence of the dense nature of this stratum, the alluvium which covers it is full of water—a circumstance of immense importance to the metropolis and its vicinity. Many of the wells are not deeper than the alluvium, and the quantity of water which they afford, is incredibly great. This water is very limpid, but rather hard. Many of the large distilleries, sugar-houses, and some of the breweries, are supplied with astonishing quantities of water from these shallow wells. But a number of the wells in London, and very many on its north and north-east border, are sunk through the clay to the sand beneath, and these afford a remarkably soft water, free from salts, and well adapted to domestic use. Many places, now abundantly supplied by these perforations, were without good water, until within the last thirty years. Some of these wells are of surprising depth; frequently more than a hun-

dred feet, and in some instances three hundred, and in one or two, more than four hundred feet have been perforated, before a supply of water was attained. But a more singular fact is, that, in almost every instance, when the water below the clay is fairly arrived at, it rises to within a short distance of the surface, and remains permanently at that height. A well at Epping, sixteen miles from London, was sunk two hundred feet, and then a hole, four inches in diameter, was bored two hundred and twenty feet farther, without finding water. It was then considered a hopeless case, the boring was abandoned, and the well covered over : at the end of five months it was found that the water had risen to within twenty-six feet of the surface, and it has so continued. The water is limpid, and soft. This well extends eighty feet below the bed of the Thames, and rises three hundred and forty above its level. The rise of water in a new well, sometimes causes a fall in those of the neighbourhood. This has been the case, with respect to wells on the opposite side of the Thames—a fact, which proves that the currents of the river flow over this stratum of clay.

The London clay constitutes the soil of Middlesex, and, in a large proportion, that of the adjoining counties. When wet, it adheres to the shoes, and produces a singular degree of tenacity in the black mud of the streets of the city. Barren as this clay naturally is, it is converted into rich garden mould, by abundant and judicious manuring, but it requires chalking or liming before it becomes well adapted to grain. It is, however, productive of very fine elm, oak, and ash timber.

The mineral contents of this remarkable stratum, are sulphuret of iron, selenite, and occasionally phosphate of iron. Common copperas, is, in several places, manufactured from the decomposed pyrites which the clay affords. Another curious mineral, which the clay produces, is argillaceous limestone, in ovate spheroidal masses. They are traversed in various directions by cracks, which have become filled, partially or wholly, by calcareous spar, or sulphate of barytes, and hence have obtained the name of septaria. This material, when calcined and ground, affords that excellent mortar for building under water, and for stucco, known by the name of Parker's cement.

Since I have fallen, rather accidentally, into the deeps below this great city, I will also remark, that few formations claim a greater interest than this, from the organic remains

preserved in them. Among these are those of the crocodile and turtle ; several species of vertebral, and many of crustaceous fish ; of testaceous molluscæ ; most of the genera of recent shells, or impressions of them ; masses of wood, either charred or fibrous ; fossil copal ; amber ; and in one locality, the (isle of Sheppy,) there has been found such an astonishing quantity of fruit or ligneous seed vessels, as to have enabled one gentleman to select 700 specimens, none of which are duplicates, and very few of which agree with any seed vessels at present known. Some of them appear to belong to tropical climates ; such as a species of cocoa nut, and some varieties of spices.

London is thoroughly drained by sewers, notwithstanding the general level of the city, and its moderate elevation above the river. This has been effected by preserving the natural water courses, and converting them into main sewers. Not only is the cleanliness of the town thus secured, but a most valuable convenience is obtained in the private accommodations that are indispensable to every house. It appears to me to be highly incumbent on the police of our American cities, to pay more attention than has yet been done, to the very important object of good draining, by subterranean passages, and to supplying the houses with an ample quantity of water. The absence of those very requisite provisions, is productive of great domestic inconvenience, and extremely detrimental to general health. New-York is, perhaps, more deficient in those regulations than most other towns in the United States.

It is generally admitted, that the population of London exceeds one million. This result is deduced, chiefly from the official returns : but it comprehends such of the adjoining villages, as form nearly a continuous series of houses with the streets of the metropolis. Exclusive of those villages, the population is about 898,000. The duke of Sussex, in his speech at the British and Foreign School Society, stated, that within a circle of ten miles diameter, there were 1,500,000 souls : an assertion, for which he doubtless had sufficient authority. To furnish an ample supply of fresh provisions, daily, to such a prodigious mass of inhabitants, would seem to be physically impossible, did not the markets of London sufficiently attest the contrary. Vegetables are plentiful and good, except potatoes, which are very inferior to those in the north of England. Pease are a delicacy ; but cauliflowers and broccoli are abundant and

excellent. The strawberries and gooseberries, I have found, in general, to be preferable to ours, at least in size. More pains are taken in the cultivation of them. London is not very liberally supplied with fish; but the fish markets, or more properly the fish shops, display a fine variety, and are kept in a degree of neatness, well worthy of imitation. The salmon is very fine, and apparently in abundance. The price of it varies from 1s. to 2s. sterling per lb. The turbot is an excellent fish, rather exceeding in size our sheep-head, and nearly equal to it in flavour. They sell from 10s. 6d. to 15s. each. The soal, also a good fish, costs from 1s. to 1s. 6d. per pair. Of meat the supply is, perhaps, always adequate to the demand; but the prices are considerably higher than in our most populous towns. Beef sells from 9d. to 1s.; veal 10d. to 1s. 2d., mutton 7d. to 10d. Poultry is still more costly. Common fowls are from 8s. to 15s. per pair; turkeys each 10s. and upward; and geese 6s. Rabbits, of which there is an abundance in market, are 1s. each. Butter costs from 1s. to 1s. 8d.; and eggs from 20d. to 3s. per dozen. These are the prices in the west end, but in the city they are not quite so high.*

One custom I have observed in London, and in most of the English towns through which I have passed, in relation to the markets, which appears to be exceedingly commodious to the citizens; namely, the establishment of meat-shops, in various parts of the town. It is certainly very inconvenient for a person in business, to be under the necessity of going every day, half a mile or a mile, to market. The sacrifice of time thus required, is a tax upon industry of no small moment. The convenience therefore of a neighbourhood, may be much increased, by permitting a butcher or dealer, to open a shop and expose for sale a variety of meats. These shops are kept perfectly clean. I know of no objection, that could lie against the introduction of this custom into our large towns, excepting, perhaps, that, during the heat of our summers, there might be some danger of unpleasant effects from the neglect of cleanliness. It would be very easy, however, to guard against this, by the appointment of an inspector.

Notwithstanding the high price of butcher's meat in London, and its necessary exclusion, on that account, from the tables of the poor, at least in comparison with some other countries, the annual consumption of the metropolis,

* These are the sterling prices.

as stated in the registers, appears to be enormous. The number of bullocks is estimated at 110,000 ; of sheep and lambs, more than a million ; and of calves and hogs, in proportion. The total value of butcher's meat sold in Smithfield market alone, is estimated at £8,000,000 per annum. The surprising improvements which have taken place in the breeding and fattening of stock, may be judged of from the fact, that in the year 1700, the average weight of oxen, killed for the London market, was 370lbs. ; of calves 50lbs. ; and of sheep 28lbs. ; while at present, that of oxen is 800 lbs. ; of calves 140 lbs. ; and of sheep 80lbs.

The beauty of the public squares, and the wide streets which open into them, in the western and northern parts of the town, give an ornament and dignity to this metropolis, which, I fear, our cities will never be able to boast of, if the policy with which they have been planned, and in conformity to which they are now rapidly extending, should be persisted in. It is, certainly, a narrow-minded interest, which converts every twenty-five feet of ground into a building lot ; and makes no provision for free air, for trees, shrubbery, and flowers ; for spaces, into which the vivifying light of the sun can easily penetrate, and renew the springs of life, health, and pleasure. When I consider the plentifulness and cheapness of land, in New-York and Pennsylvania, in connexion with the plans upon which the chief cities of those two great states are built, I blush at the parsimony with which the ground was so entirely appropriated to streets and lanes, as not to leave even a suitable provision for markets. The Dutch were, perhaps, excusable in laying out the city of New-York as they did ; accustomed as they were, to consider every foot of land as valuable, only in proportion to its convertibility into a street, a canal, or a cabbage ground. But in the foundation of Philadelphia, it is surprising that William Penn should have been so regardless of the healthiness and beauty of the city, and the convenience of its future inhabitants, as to ordain so small a portion of the ground to public use. It is not perhaps too late, for the municipal authorities, in a great degree, to remedy this obvious and serious defect in those two cities ; destined as they are, for ages, to contend in generous rivalry, for the commerce, arts, and elegancies of the western world.

London contains about seventy squares or open areas, more than twenty of which, include from five to ten acres each. In the centre is a large space, enclosed with iron

palisades, planted with shrubbery, and ornamented with gravel walks. Equestrian statues in bronze are, in several of the squares, placed in the centre or side of the enclosure. A wide pavement connects this enclosure with the foot walks, which are very broad, and flagged with large smooth stones. The houses around some of the squares, are nearly uniform. Those of the nobility, are, in some instances, magnificent ; but in general, the architecture struck me as being remarkable only for its simplicity and neatness.

The royal parks add greatly to the pleasure of an excursion through the British metropolis. The brightness of the verdure, the neat training of the trees and shrubbery, and the canals and bridges, which are introduced for the sake of freshness and ornament, render them the chosen promenades of almost every class. Their extent too, is sufficient for a ride of pleasure. The Regent's Park contains about 450 acres, and Hyde Park nearly 400. In the latter is a fine sheet of water, called the Serpentine River. This park is the favourite resort of horsemen and pleasure carriages, but hackney coaches are not allowed to enter it.

LETTER VII.

Bristol, 7th month (July) 12th, 1818.

MY DEAR ****,

HAVING devoted a day or two, in the city and vicinity of London, to the pleasing duties of friendship, I left it on the 6th, with my friend L. Howard, of Tottenham, who kindly offered to accompany me on my journey as far as Windsor, a distance of twenty miles, in his carriage. Stopping at the French ambassador's to procure my passports for the continent, we proceeded through Kensington, Hammersmith, Turnham Green, and Brentford, and rested at Hounslow to dine. We were supplied with a cold, but uncut rib of good roast beef, bread, cauliflower, currant pie, cheese, and beer ; for which, with the horses' feed, the charge was but six shillings.

The road to Hounslow, (ten miles,) may be considered as a continuation of Piccadilly ; one village succeeding another with but a very short interval between them. The roads were dusty, and the grass was parched for want of rain. There has not been, according to the register of my friend H., (whose merit as a meteorologist I have before noticed,)

more than a quarter of an inch of rain, in the last six weeks. I have been, hitherto, much disappointed in the climate of England. Instead of almost daily rains, fogs, and clouds, we have had nearly a constant succession of fine weather. There has been more sun since my arrival, than I expected to enjoy in twelve months. The thermometer, in London, has occasionally risen to 80°, and great complaints have been made of the heat; but a breeze has generally been felt, which has much alleviated the oppressiveness of this elevated temperature. It is admitted on all hands, however, that the season, thus far, has been unusually warm and dry.

Leaving Hounslow, we passed along the northern side of the heath, so famous for the exploits of gentlemen of the turf. It is an extensive barren, without tree or shrub, producing only a coarse grass. The surface is very rough; rising into coarse knobs, which it requires much labour to level. The upper stratum of this heath appears to be gravel to the very top, with little or no loam or mould. Very large portions of it have, within a few years, been enclosed, enriched, and cultivated, and are now, as we pass along, under good grain, pease, beans, &c. But, of the expediency of enclosing the whole of these wastes, notwithstanding the redundancy of population in England, there are, I think, just doubts. An act of parliament must first be obtained, for leave to make an enclosure, even of the smallest quantity. This, it is said, would not cost less than 5 or £600. The expense of levelling, putting in order, manuring, fencing, &c. would be so great, as, in many instances, to render it an unprofitable and losing speculation.

Hay making was going on briskly, and in almost every field there were women at work with the men. Out-door female work is much more common, throughout the country, than with us; except perhaps in the German settlements. Vast quantities of goods are transported from one part of the country to another, in large wagons, exceeding in size the Conestoga wagons in Pennsylvania. They are drawn, generally, by eight horses, two abreast. Women and children are sometimes seen on the top of the goods. Were they in America, we should say they were going to the new countries.

The wheat is beginning to change its colour, and to show signs of approaching harvest, which, it is probable, will be much earlier than usual.

We reached Slough (21 miles) about 7, and drove to the

door of Sir William Herschel. His house is of plain appearance, standing immediately on the road between Slough and Eton. He received us very politely, recollecting our interview at Greenwich. The conversation soon turned upon astronomy. He invited us to stay to tea, to which we assented, and sent the carriage to the inn. The appearance of the great telescope quickly drew our attention. It is erected in the yard, immediately back of the house ; the country all around for many miles, being nearly an entire level. The large and ponderous frame, by which the telescope is suspended and moved, rests upon wooden rollers, on a circular wooden beam or railed way ; and, although its whole weight (including the instrument) is thirty tons, the mechanism of its movement is such, as to enable a man to turn it easily. Sir W. told us, that his son moved it when only eight years old. A stage, or gallery, is adjusted to the object end of the instrument, and moves up and down with it. The ascent is by steps to a platform, and thence by a ladder. The tube of the great instrument is of sheet iron, surrounded by bands of metal, and painted, as is the whole frame, of a leaden colour. A tube is attached to the under side of the telescope, about one inch and a half in diameter, extending along its whole length, open at the object end, and at the other, uniting with a larger tube, which is conducted along, under the frame many feet, and then branches off into two small houses, which stand, one on each side of the mirror end. This tube is for the conveyance of sound. It is the speaking trumpet, through which this veteran astronomer has so often conveyed the result of his observations to his sister, who, seated in one of those houses called the observatory, has registered his angles and distances, with so much benefit to science. The other branch of the tube conveys directions to the manager of the wheels and pulleys which move the instrument. This great telescope has been erected thirty-two years, and is still in good condition. The mirror is four feet in diameter, and weighs 2500 lbs. It is an alloy of copper and tin. The Doctor informed us, it was then in the instrument, but we did not see it. He introduced us to his sister, a nimble old German lady, of plain unaffected manners, and much alive to astronomical improvements. She went with us into the observatory ; showed us her seat, and said that the Queen had once occupied it. Her brother told us, that Sir Joseph Banks once ascended to the top of the frame, which must

be at least thirty feet high, and laid himself flat on his back, on the beam which connects the two main supports ; and that, as he lay there, the Queen happened to ride by and saw him.

The great telescope weighs 8500 lbs. It is now, I apprehend, from the advanced age of its inventor, but seldom used. His son, whom I had also met at Greenwich, was from home, or we might probably have had an opportunity of looking into it ; but Sir William told us that the atmosphere was in a very unfavourable state, on account of the dry weather. In the same yard is another telescope of twenty feet focus, and about eighteen inches aperture. The machinery by which it is moved, is very similar to that of the large one, but less strong and bulky.

In adverting to his theories of the sun, of lunar volcanoes, of nebulous matter, comet making and planet forming processes, Sir W. said, that he had stated appearances as they were actually presented to him, and drawn his conclusions from them ; but if any one could explain the appearances better, they were very welcome to do so. He had not seen the objections to his theory of the sun in Dr. Brewster's Encyclopedia. He is entirely of opinion, that the asteroids were once united, and said, that if the original planet, prior to the explosion, was as large as Mercury, there must be 30,000 pieces each as large as the asteroids themselves still unseen. He thinks some of the stars may have parallax, and probably those of the second magnitude.

His opinion that there are volcanoes in the moon, is founded on an appearance of a bright light equal to a star of the fourth magnitude, on the dark side of the moon, where it is known that there is a cavity. He has seen this light several times, and also an appearance like lava. Showing it once to a gentleman of Bath, the latter exclaimed with vehemence, that he saw not only the *fire* but the *smoke*. He thinks the satellites of the Georgium Sidus can be seen with no instruments but his own, for there is an essential difference between the magnifying power of an instrument, and the *space penetrating power*. The latter requires the condensation of light, and of course a large aperture. In examining small and indistinct objects, such as the nebulae, he tries first his seven feet telescope, then his ten feet : if that will not do, he resorts to the twenty feet, and then to the forty feet instrument. He has one in his yard of about five feet in length, with a large aperture, which he calls his

comet hunter. Sir W. Herschel must now be nearly eighty years of age. There are about seventy papers of his in the *Philosophical Transactions*. We left this worthy couple, much pleased and well satisfied with our visit.*

7th month (July) 7th. We passed this morning through Eton and over the Thames to Windsor. These two places, the former celebrated for its school, a large Gothic building, and the latter for the royal castle, which has been the favourite residence of the present king, and in which he has remained during his affliction, are on opposite sides of the Thames. Windsor is a pretty large town; Eton is of less size. The castle is on a hill, which overlooks the two towns and the country around to a great extent. Our coachman, understanding his business, drove directly through the castle gate, (the armed centinels making no opposition,) and stopped in the spacious yard, where it was suffered to stand. A porter opened the way for us into the castle, and conducted us to a large hall, where a servant soon appeared to escort us through the rooms and explain the pictures. This is done almost every where, and serves a valuable purpose. By repeated practice they can explain the subject of each picture, tell its age and the name of the painter, with great volubility and correctness, always calculating on a suitable *douceur* for saying their lessons so well. We were conducted through a great number of rooms, the walls of which were ornamented with pictures, mostly from the old masters of the Italian and Flemish schools. There were two which particularly pleased me in this fine collection. One, of the present queen, with two of her children, the prince of Wales and duke of York, both very small, standing beside her: and the *Misers*, by Quintin Matsys, the blacksmith of Antwerp. In one of the apartments is a great number of

* This great astronomer died at his house at Slough, on the 25th of August, 1822, in the eighty-fourth year of his age. His father was a musician. Sir William was the second son, and was placed at the age of fourteen in the band of the Hanoverian foot guards. He came to England when he was nineteen, and obtained a livelihood, during many years, by his musical talents; but also devoted himself, from the bent of a strong inclination, to mathematics and astronomy. Unable to purchase a telescope, he succeeded, after encountering numerous difficulties, in constructing one for himself; and in 1774 first saw Saturn in a five feet reflector, made by his own hands. He then attempted larger instruments, and succeeded in completing a seven, a ten, a twenty, and finally a forty feet reflector. He laboured at one time with such perseverance as to have actually finished 200 object mirrors, before he could satisfy himself with the performance of one. In 1781 he discovered the new planet, which he named *Georgium Sidus*, and, in consequence of his great merit as an observer, the king settled upon him a handsome salary. His large telescope at Slough was completed in 1787. His numerous discoveries, and the bold and sublime inferences he has drawn from them, are well known in the scientific world. He married the widow of John King, Esq. and with her enjoyed great domestic happiness. He has left one son, whose talents and acquirements surpass even those of his father.

fire arms, of the reign of Edward VI., tastefully displayed on the wall. This room is at present used as a chapel! In another apartment, our guide told us that the room immediately under the adjoining one, was the king's chamber, where he was at that moment. A sight of his majesty would probably have been preferred by the company to that of all the pictures; but it would doubtless have been the most unpleasant and melancholy picture in the castle; and it is, of course, for the best of reasons, excluded from the eye of all but those who are engaged about his person. I learned afterward that the king is quite blind; that his beard has extended to his breast; that his constant delight is playing on the piano; that he is seldom spoken to, except on subjects relative to his personal comfort, as conversation, more than any thing else, excites and disturbs him. He is said to be particularly averse to the Prince Regent, and will not suffer him to be in his room. The prince lately went in to look at him: the king said he was in the room; and ordered him out. The prince stepped just without the door, and the waiter said: "Your majesty is mistaken, the prince is not in the room:" the king insisted that he was, for, said he, I *smell* him. This was probably the truth, in consequence of the perfume of the prince's dress. Does it not afford an additional proof that the loss of one sense, is followed by an increased acuteness of some other?

We walked round the court, in which is an equestrian statue of Charles II., and ascended to the top of the western tower, whence, according to a statement on a board, can be seen twelve counties. The perspective is very fine for a country so extremely flat as is that in the neighbourhood of London. From this tower, it is asserted, the bell of St. Paul's cathedral is sometimes heard to strike, though at the distance of twenty miles; a circumstance which is reported once to have saved the life of a sentinel. He was accused of having fallen asleep at his post; but alleged that he was not asleep, but listening to St. Paul's clock, and that he heard it strike thirteen times. This, upon his trial, was proved to be the fact, and it saved his life. A considerable body of the king's life guards were on parade at the gate as we passed out. I remarked that many of the musicians were black, and dressed like Turks. The whole length of Windsor castle, from east to west, is 1480 feet, and the area which it covers, exclusive of terrace walks, is about twelve acres. The terrace on the north side, one of the

most beautiful walks in the kingdom, is 1870 feet long. It was made by Queen Elisabeth.

Parting here with my kind and worthy friend Howard, I passed through a beautiful avenue, with double rows of majestic elms, to the park ; and made a circuit of about four miles through it. The number of deer which appeared in the course of this ride, could not be estimated at less than 300. They are very tame, and by long domestication, lose much of that delicacy and beauty of form, which are possessed by the same animal in a wild state. But their colours here are very various, brown, spotted, and some quite white. They grow to a large size. The park of Windsor is very extensive, containing, it is said, 3800 acres ; and a little park, on the north and east side of the town, contains 500 acres.

I left Slough about half past six P. M., in the Bath coach. At Hungerford we entered Wiltshire, remarkable for the extent of its downs. These are barren tracts, rather hilly, and too sterile to produce any thing but grass for sheep and geese. The upper stratum is chalk ; the white surface of which is covered only by the green turf. An evidence of this is exhibited, rather curiously, to the passenger, a little to the west of Marlborough, a handsome town, through which we passed at four A. M. The figure of a horse of gigantic size, was marked out on the side of a hill, facing the road, and about a quarter of a mile distant. The grassy surface being taken off within these outlines, so as to expose the chalky stratum, there remained the whole figure, perfectly white, and in such an attitude, as to appear erect ; and, at the distance we viewed it, quite in relief, as if almost detached from the hill. I saw two of these figures.

The day opened upon us almost without a cloud, and in a part of the country cultivated to the highest perfection. As the sun rose above the horizon, I thought the freshness and beauty of the landscape superior to any thing I had witnessed. The hills, on each side of the road, were verdant with a shower in the night ; their contour had a regularity and symmetry, which art had impressed upon them ; the hedges were unusually neat ; and beyond them, the "timid hare," was seen leaping over the field,

" And frequent
Turning, stopp'd to gaze at early passenger."

It was a scene which only the pen of a Thomson could justly describe.

The horse bean is cultivated in large quantities in this part of England, for cattle and horses. Potatoes are seen growing, as if planted at random, over the field, and their blossoms, in the morning, give to the fields a richness and gayety not witnessed on our farms. Between Marlborough and Chippenham, the road passes through a park, called Bow Wood, belonging, as I was told, to the marquis of Lansdown. The deer were grazing in the park ; a turnpike gate on each side, securing them within its bounds. The fields, with fine crops upon them, are in many places, entirely exposed to the road, without hedge or fence of any kind. In the course of this morning's ride, we passed several of those prodigious conical elevations, called barrows. One of them, I should judge to be 200 feet in diameter, with an elevation of 150. They are generally supposed, I believe, to be mounds erected over the slain, in a very early period of English history : in this respect, therefore, they correspond with the ancient mounds, which still exist, in some of our western and northern states ; and respecting which, the present race of aborigines, are quite as ignorant as the newest settlers. One of these mounds, near Wheeling, on the river Ohio, is 250 yards in circumference, with a perpendicular height of about 70 feet. Trees of very large size, are growing thickly upon it.

We arrived at Bath, about eight A. M. After breakfast, I spent several hours in walking through the town, having no letters, and intending to make but little stay in it. This city contains about 40,000 inhabitants. Its appearance must strike every stranger, both as more modern, and more elegant, than English towns in general : I have seen none to equal it. The material of the houses is a free-stone, quarried in the vicinity, and which, when first used, is of a fine cream-colour. It is that kind of lime-stone, called by mineralogists, *oolite* or *roe-stone*. The greater part of the city is of modern structure ; and much pains have been taken to produce an architectural effect. The town is surrounded by an amphitheatre of hills ; the buildings in some parts extending considerably up their sides. A fashionable mode of building here, as well as in other parts of England, is to erect a considerable number of houses together, in the form of a crescent. Several of these are built upon the sides of the hills, and make a noble appearance. Great-Pultney-street, about a quarter of a mile in length, appeared to me to be the handsomest I had

ever seen any where. Sydney Garden and Hotel, at its extremity, is a fashionable resort. They were making preparations for an illumination of the garden, with fire-works, &c. this being the day of the public races at Bath. The garden is laid out with much taste, and the trees were hung with lamps, in a variety of fantastical figures. The extent and improvement of this city, have been chiefly produced by the celebrity of its waters. These are thermal springs, arising near the river Avon, which runs around the south and eastern sides of the town. Extensive baths are erected, for the convenience of visitors. The company that resort to the springs, as well as the citizens of the town, have the liberty of assembling in the great pump-room; a spacious building eighty-five feet long and forty-six wide. Over the door of this room, upon the architrave, is a Greek inscription, from the opening of the first ode of Pindar,—**ΑΡΙΕΤΟΝ ΜΕΝ ΥΔΩΡ**—"Water! of elements the best!" The warm water of the spring is here constantly ready, for all that choose to drink it. The public season at Bath, is during the winter. It is a hot place in summer, and is very much deserted. The streets, at this time, appeared to me, after escaping from the bustle of London, to be silent and solitary. The cathedral or abbey church, is a famous specimen of that style of architecture, (venerable for its age, and for the time and labour expended on it,) which distinguishes the ancient churches of this country. It was founded in the year 676, by king Osric; and is supposed to be built on the spot where stood the Roman temple of Minerva. The present pile was begun in the year 1495. Dissenters are numerous in Bath; as are also its charitable institutions. A literary and philosophical society was instituted in 1815; and a bank for savings was established in the same year. In lieu of hackney coaches, the citizens and visitors of Bath are transported from place to place in sedan chairs. The chairmen have regular stands, and their prices are fixed by law.

In the afternoon I took the coach for Bristol. The distance between these towns is about 12 miles, over one of the best roads I ever travelled. It is quite smooth and so hard, as in some places to have received a real polish from the iron of the wheels. It is formed of a hard lime stone, which is broken into small pieces by hammers, and ground into powder gradually by the wheels. The superior excellency of the English roads is doubtless owing to the broad wheels of their large wagons. These are generally hooped

with double tire, and are from eight, to ten or twelve inches broad. Being heavily loaded, they grind the stones fine, and at the same time prevent the formation of those routs or gutters, which so much disfigure and injure some of our United States turnpikes.

The approach to Bristol is announced by clouds of smoke, issuing not only from the houses, but in heavy volumes from the tall cones of numerous glass factories. We crossed a wide canal, or new river, and entered the town by a narrow and uncomfortable street, the houses being old, the floors lower than the surface of the street, and the second story projecting over the first.

The coach drove to the *Bush*, a large inn, and said to be one of the best in the town ; but Bristol, I believe, is not remarkable for good inns.

At the house of J. Waring, in Queen Square, to whom I had a letter, I met with a truly hospitable reception, and found, in the kindness and intelligence of this family, and of other friends, a happiness which rendered a stay of five days in Bristol exceedingly interesting. This town contains many edifices and institutions, well worthy the attention of a stranger. Several of the churches are very ancient, and exhibit some of the finest specimens of Gothic architecture. The most striking of these is Redcliff church, the foundation of which was laid in 1274. Having been damaged by lightning, it was completely repaired in 1456 ; prior, of course, to the discovery of America. Its dimensions are 239 by 117 feet. The interior makes a forcible impression, by its loftiness, its pointed architecture, and its various ornaments. Over the altar is a large painting by Hogarth. The subjects are the ascension, the sealing of the tomb, and the visit to the sepulchre. The monuments are numerous. Among those which most attracted my attention, was one of Admiral Penn, father of the founder of Pennsylvania. It is surrounded with banners and trophies, one of the flags, which he had taken from his opponents, still hanging in tatters over the monument. I have observed this in several of the churches, particularly in St. Paul's cathedral in London. What a strange perversion of the design of a place of worship ! as if a Christian, instead of resorting to the temple of devotion to learn humility, stood in need of having his thirst for glory, or his passion for revenge, constantly fed by external excitements ! In ascending the turret of this edifice, I was shown the loft and the

boxes, in which Chatterton is said to have discovered the manuscripts which he published under the name of Rowley. Poor Chatterton was the posthumous son of a sexton of this church. His genius and his fate are too well known, to need a description in this place.

The College Church or Cathedral, is a large structure, originally the church of a monastery of St. Augustine, founded by Robert Fitzharding, a descendant of the kings of Denmark. Nothing remains of the ancient monastery but a gate way, which, as a specimen of Saxon architecture, cannot be viewed without emotions of pleasure. It is a finely carved arch, and richly ornamented with sculpture. Bishop Warburton was once a dean of this church and resided near the arch. It is kept in very neat order, the monumental stones are numerous, the sculpture of many of them, very fine, and the inscriptions, in general, appeared to me more tasteful and elegant than ordinary. The celebrated epitaph of Mason on his wife,

"Take holy earth," &c.

soon claims the notice of a stranger, and how frequently soever he may have read, and repeated it, he will scarcely fail again to peruse it, with renewed interest, on its original marble. The admirers of Cowper will also notice, with peculiar feelings, an inscription to lady Hesketh, who died in 1807. An elegant mural monument, erected by a husband to the memory of his wife, aged nineteen, I thought worthy of particular regard.

"Formed by nature
To attract observation, and invite respect,
Lovely in her person, graceful in her manners,
Amiable in her disposition,
Happy to receive pleasure, and more happy to impart it;
Every one was conscious of her merits
But herself.
The disease to which she fell a victim
Added lustre to the virtues of her mind;
And the submissive piety which prepared her way
To heaven,
Taught the duty of resignation
To her afflicted husband."

The infirmary of this town is a very large building, erected and supported as a hospital by public contribution. We were shown through the wards by the matron, a very respectable woman, who conducts the numerous domestic concerns of this charitable institution, without the aid of any other person than the governors, physicians, and servants.

The charities of Bristol are very numerous. There is

probably no place in Great Britain, where greater efforts have been made to relieve every kind of distress by gratuitous assistance than in this city. An impulse was given to feelings of this kind, by the extraordinary benevolence of the late Richard Reynolds, whose character seems to be venerated by all. But that poverty is not subdued by these efforts, is obvious to every one who walks the streets. Mendicants are more numerous, and their appearance is, in general, more squalid here than in London. The opinion of several intelligent individuals, with whom I conversed on this subject, was, that the evil is rather increased by these extraordinary exertions, than permanently diminished by them. A vast amount of immediate suffering is doubtless thus prevented; but how desirable is it that the institutions of society should be so wisely established upon the basis of an enlightened humanity, as to prevent the accumulation of so much poverty. The Lancasterian school here does much credit to its patrons and supporters. It occupies a new and very commodious building; the female apartment being above that of the boys, and conducted by a mistress.

I spent one night at the summer residence of a friend, about four miles from the town, and for the first time in my life, slept under a roof of straw. But let it not be imagined, that, on that account, I was badly accommodated, or that the cottage of my kind host was a mean habitation. It was in reality one of the neatest places I have seen in England; and England is certainly superior to most countries in its style of rural architecture and improvement. All that a summer residence could demand of comfort and convenience, was to be found in this cottage. A hall of entrance, a large and well lighted parlour neatly furnished, a breakfast room, and kitchen, occupied the lower floor, and convenient bedrooms the second. The grounds are laid out with taste, and planted with a variety of shrubbery. Indeed one scarcely visits a country house of decent pretensions, without finding gravelled walks, winding through plantations of shrubbery, in which variety seems to be the predominant feature. The high stone walls (sometimes ten or twelve feet) which surround the gardens in the southern part of England, would lead to the conclusion that every neighbourhood is infested with thieves. But on inquiry I found that though safety is one motive in erecting these expensive walls, the principal inducement is the cultivation of fruit. Neither the peach, the plum, the nectarine, the cherry,

nor the apricot, succeed well in the open ground, but require to be trained upon a wall which acts as a defence against the wind, and increases the temperature necessary to the perfection of the fruit.

The neighbourhood of Bristol contains many bold eminences and picturesque views. From a hill near the cottage where I slept, a charming view is obtained of the Severn, and a great extent of adjacent country, including the house and extensive grounds of Lord De Clifford, while the mountains of Wales skirt the horizon in the west. In view, toward the S. E. was the house of ——— Miles, a Bristol merchant, whose country establishment was estimated by my guide at the cost of £250,000 sterling, being part of the fruits of successful trade.

The Hot Wells of Bristol have been much celebrated as a place of resort for invalids. The spring, which supplies the water, issues from the foot of a rocky hill, on the margin of the Avon. The river in this place, though not a large stream, seems to have broken through a high hill, and to have laid bare its interior, consisting of a silicious ironstone. The rock is almost perpendicular, on each side of the river, and rises to the height, I should think, of 200 feet above its level. It contains quartz crystals of considerable beauty, sulphate of barytes, sulphate of strontian, and other minerals. The region around Bristol is, on the whole, remarkable for the variety of its mineral productions. A small quantity of coal is found near the Hot Wells. From the downs, over which we rode on our return, a very fine view is had of the meanderings of the Avon, and the adjoining country, to a great distance. The Hot Wells are scarcely entitled to the name they bear, the temperature of the water being but about 74°; and if they possess any medicinal virtue, it must be ascribed to the absence, rather than to the presence, of foreign ingredients, for its analysis proves it to be an unusually pure spring water. According to Dr. Carrick, it contains but forty-seven grains and three quarters of saline matter in the gallon, consisting of the salts of magnesia, soda, and lime. It is slightly aerated with carbonic acid. The waters of Bath contain double, and those of Cheltenham about eleven times, the quantity of solid matter that is found in the Bristol waters. These springs, though still resorted to, are in less repute than formerly.

Dr. B*** obligingly conducted me to his lodgings, the house in which the venerable Richard Reynolds lived and

died. It is a plain, but comfortable mansion, with a pleasant garden, in a retired, but not a fashionable part of the town. This worthy man, it is said, often acknowledged that he was not naturally benevolent. His exalted goodness resulted, of course, from considerations of religious duty, combined with the dictates of a sound understanding. He was very discreet in his charities. He frequently refused to give when called upon, greatly to the disappointment and chagrin of the applicant; and, after taking time to reflect, gave more than he was asked for, and in a way better suited to his views. He mostly satisfied himself, by inquiry, before he gave. The life and deportment of this excellent man, demonstrate, in a very striking manner, the power of Christian principles upon the human mind. That an individual in the common walks of life, possessed of wealth acquired by successful industry, and naturally attached to that wealth,—that a mind by no means peculiarly favoured by nature with the attractive virtues, should, by the bare consideration of Christian duty, and the habitual influence of Christian motives, become so raised above others by the extent of his benevolence, and an object of such universal affection, is a phenomenon, even in the history of private worth. So common is the opinion, that a measure of that love of worldly distinction which is radically ingrafted in the human mind, must operate as a stimulus to extraordinary exertions of every kind, that it will perhaps, with difficulty be believed, that a private individual, the loss of whose humane exertions was so severely felt, that it was deemed expedient to form a society expressly to supply that loss, could have been unmindful of the motives of future fame. But the life and character of Reynolds were sufficient, I believe, to satisfy all who knew him, that his views were inseparably connected with that love of his fellow-creatures, which had its foundation in the love of his Creator—and with those exalted motives which arise from a prospect of the “life to come.”

I took tea with J. Reynolds, a son of the philanthropist, who has recently settled in Bristol. He has a numerous and very genteel family.

At the house of Dr. Pole, a countryman of ours, I found much to interest me. He is well known by his medical publications, and also by a valuable account of the rise, progress, and importance of the instruction of adults by Sunday and other charity schools; as well as by other tracts

upon useful subjects. He is a person of much private worth! His rooms contain a pretty collection of minerals, and other subjects of natural history, drawing, &c. He possesses, himself, a fine taste for drawing, especially in taking the profiles of his friends, which he executes with uncommon neatness.

This city contains a polished and truly respectable society, in which are several persons of considerable eminence in science and learning. Dr. Pritchard, respecting whose talents and research I had formed a favourable opinion from the perusal of his work on the "Physical History of Man," did not by any means lessen in my estimation from personal acquaintance. His mind is at once excursive and discriminating, and if his genius and industry shall be aided by time and health, he bids fair to become, not only an ornament to the medical profession, but to the literary ranks of his country.

Bristol has been distinguished as the second commercial city in the kingdom: but this glory appears to have past its zenith; and unless its manufacturing industry shall compensate for its declining commerce, it must gradually experience the fate of other cities, which, in the fluctuations of time and fortune, have sunk by degrees from their meridian elevation.

The city stands upon the Avon, a few miles above its junction with the Severn. The Avon scarcely deserves the name of a river, as in some places, below the city, it is hardly wide enough for two ships to pass each other; and at low water, the bottom is left nearly dry. Yet, as the tide rises to the astonishing height of more than thirty feet, it affords an easy passage, at high water, for ships of 1500 tons; and the extraordinary enterprize and industry of the merchants, and other citizens, have, by turning the river into a new bed, cut expressly for it, and forming a large basin at the town, in which ships float with freedom, nearly surmounted the difficulties of this mud creek navigation. It is not very long since, as I was informed, that a ship, with a valuable cargo, was cast away in this little river, by the tide's leaving her to rest on the mud, when the strength of her timbers, unable to sustain the internal pressure, gave way to her utter ruin. The improvements in the navigation, just mentioned, cost the city nearly £600,000.

The parts of the town near the water, are low, dirty, and uncomfortable; but, the ground being very uneven,

some of the elevated portions are truly fine. The village of Clifton, in the neatness of its buildings, and the beauty of its prospects, is not surpassed by any place I have yet seen in England. It is the court end of Bristol. Queen Square is a large and fine opening, surrounded by respectable buildings, and rows of majestic trees. In the centre is an elegant equestrian statue of William III. erected in 1736, at an expense of £1800.

LETTER VIII.

Burncoose, in Cornwall, 7th month (July) 18, 1818.

MY DEAR ***** AND ****,

The evening prior to ~~my~~ leaving Bristol, my kind host, and two of his daughters, proposed to accompany me to Barley Wood, the residence of the justly celebrated Hannah More. This residence is in Somersetshire, twelve miles from Bristol, on the road to Bridgewater. I could not but feel gratified with such a proposition, as there are few names in the numerous list of living authors, whose writings are held in higher estimation by the thinking and serious part of the reading community, both in England and America, than that of Hannah More.

13th. The neighbourhood of Bristol is extremely populous. In some of the adjacent villages, as I was informed, the pressure of numbers is so great upon the means of support, as to produce a state of society, highly unfavourable to good morals, and dangerous even to public safety. The country around the town is finely cultivated; and the heights over which we passed, on the side of Bedminster, or that part of Bristol which is west of the Avon, afford a charming view of the city, and circumjacent country. The ancient churches, with their numerous turrets; the vast size of some of the manufactories; the numerous and tall chimnies of the glass-houses; the cheering verdure of the gardens; and the trim aspect of every rural spot within reach of the eye, give to this view, a character very different from any thing which the traveller in America will be able to find in the scenery of our new world for ages to come.

Bristol is situated on the line between Gloucester and Somerset. It was erected into a distinct county by Edward III., as a reward to the loyalty of its inhabitants. At present, the votes are almost equally divided between the supporters and the opposers of ministerial measures. The

period of an election is, of course, a time of bustle, and too often of turbulence and riot.

We arrived at Barley Wood, about noon, and were kindly and politely received by Martha More, the only sister, and domestic companion, of the author. Their situation is delightful. The cottage, as it is called, though covered with thatch, is exceedingly neat, and tasteful; and, both within and without, wears all the appearance of simple elegance. It occupies a situation, on the gentle declivity of an eminence, and commands a view of the village of Wrington, a short distance below, and a richly variegated country, within an extensive horizon. The selection of this spot, the plan of the cottage, and the arrangement of the grounds, are due to the ingenuity and talent of the two sisters, and reflect the highest credit upon their taste and judgment. In the short conversation we had with Martha More, before her sister joined us, the former spoke much of the latter, and appeared as much interested in the reputation of her works, and as highly to enjoy their celebrity, as the author herself could do. The latter soon came in, and took us by the hand, with great ease and urbanity. She congratulated my friend W. as an old acquaintance, whom she had not seen for a considerable time. A table was placed in the middle of the room, around which we all seated ourselves, and, as I was introduced to them as an American, the conversation turned upon that quarter of the globe. The charitable and religious institutions of our country were inquired after by Hannah, with the zeal of one who feels a lively concern for the good of mankind, in every part of the world. She showed us a letter she had received from a deaf and dumb child of Dr. C. of Hartford, Connecticut, accompanied by an explanatory letter from the worthy principal of the institution, in that town, for the instruction of the deaf and dumb. The letters had given her much pleasure. The cause of Bible societies she has much at heart, and is decidedly opposed, though a firm churchwoman, to the restrictive principles advocated by some of the mitred heads of the establishment. She had just given a notable demonstration of her zeal in this cause. The anniversary of the Auxiliary Society of the neighbourhood, was held last week, and she and her sister gave a dinner and a tea entertainment to the whole company. There were 103 persons who partook of the dinner, and no less than 300 that drank tea. As many as the cottage would hold, were accommo-

dated in it ; and the rest were served upon the lawn, around it. Among them were thirty-seven clergymen, and the bishop of Gloucester. Notwithstanding she is at the age of seventy-five, and has endured many attacks of disease, she went, yesterday, twenty-two miles, to attend a Sunday school. Her constitution, (or, as she termed it, her muscular powers,) she said, was very strong, for it had carried her, with the blessing of Providence, through the assaults of twenty mortal diseases. She acknowledged, that she had been much opposed to America, during the revolutionary struggle, but admitted that we had many worthy characters amongst us. The native strength of her mind has enabled her to surmount most of the prejudices arising from political opposition ; but it was still apparent, from the conversation of these worthy ladies, that the want of that more exact information, which can only be obtained by proximity and intimacy, tends to keep alive the prejudices, which sprang from the contest for independence, and which, not only the true interests of both nations, but every principle of virtue should induce us to suppress. These two ladies are the survivors of a family of five sisters, who formerly lived in Bristol, and subsequently at Bath. Some of them were the managers of a distinguished female school, by which they increased their means of support. They all possessed talents above mediocrity ; but Hannah is alone celebrated for her literary productions. She was warmly beloved by them all ; proving, that her talents have been ever associated with amiable qualities, and with true goodness of heart. Her *Search after Happiness*, and *Sacred Dramas*, she told me, were the juvenile productions of seventeen ; and written with the intention to counteract the growing custom of introducing into female boarding-schools, plays of an improper tendency, and allowing them to be acted by the pupils. Her views, she thought, had been successful. She, and her surviving sister, retired some years ago to this spot, which they found, in a state, wild, and uncultivated. They selected it, for the beauty and healthiness of its situation ; and had they surveyed all the south of England, it is questionable whether they could have found a situation more truly delightful. The village at the foot of the hill, contains an old Gothic church, and provides them with all the facilities of mere neighbourhood, at a convenient distance. The house is large enough for all the purposes of domestic comfort.

and hospitality. The walls of the sitting room, below, are ornamented with the portraits of their most distinguished friends. On our attention being turned to them, the characters of the individuals, and particularly their most valuable qualities, were adverted to by Hannah More, with a warmth and energy, which proved that age had not diminished the force of her early recollections, nor the ardour of her friendship. Among these favourites, I noticed particularly, the likenesses of Wm. Wilberforce, Elisabeth Carter, Richard Reynolds, and — Henderson, the celebrated youthful genius of Bristol. In one corner of the room, was a picture, which had been sent her from Geneva. It was a descriptive scene from one of the most interesting passages of *Cœlebs*,—Lucilla in the attitude of prayer at the bed-side of her poor sick neighbour. Her bed-chamber, into which we were introduced for the sake of a more complete prospect of the country, contained her library ; which I should estimate at least at a thousand volumes. It consists of the most select and valuable works upon theology and general literature. She showed us a letter, from a Russian princess, written with her own hand, in broken English, solely to acknowledge the satisfaction and benefit which the works of Hannah More had afforded her. We were gratified too, with seeing a translation of *Cœlebs*, in the German language, and a splendidly bound copy of it in French, sent to her as presents from the continent. Industry is doubtless one of the habitual virtues of these worthy sisters. Besides the numerous literary productions of the elder, and the extensive charitable offices in which they are engaged, every thing within and about the cottage,—the furniture, the needle-work, the flowers, bears the impression of taste and activity.

We pursued the windings of a gravelled walk among the shrubbery, and reposed ourselves on seats in rustic arbours, from which glimpses are obtained of the expanded valley below. In an open spot, at one of the turns of the walk, was a neat, but plain monument, to the memory of Bishop Porteus, who had been their particular friend ; and in another place, a more costly stone was erected to the memory of John Locke. This was a present to these sisters from Lady Montague ; and a very appropriate place it is for its erection ; for, in an old thatched house adjoining the church yard in the village of Wrington, at the foot of the hill, did that great man draw his first breath. His mother, while

travelling, was constrained to take up her residence in this house, until her new-born child was old enough for her to pursue the journey.

We all left Barley Wood, with feelings of much satisfaction from the visit. Mine was not diminished, by carrying with me a present of a copy of "Christian Morals," from the hands of the author, given as a memorandum of the visit, and in which she wrote my name, in an excellent hand, without spectacles. It is rare, indeed, to find so much vivacity of manners, at so advanced a period of life, as these ladies possess. They are fond of a country life. Hannah remarked to us, that the only *natural* pleasures which remained to her in their full force, were the love of the country and of flowers.*

My kind attendants conducted me a few miles farther, to Langford Inn, where we took dinner, and where they waited, till the arrival of the coach which was to take me to Bridgewater. I parted from them under those impressions, which the reception of genuine hospitality, and the feelings of sincere and grateful friendship, are likely to perpetuate.

The country between Wrington and Bridgewater is, in general, very level, except a ridge of ground, called the Mendip hills, which are so high as to have been styled the Alps of Somersetshire. The country below being almost a perfect plain, the prospect from some points of these hills, is very extensive and beautiful. The hills abound with veins of lead and calamine. The latter mineral, obtained from this region, supplies nearly all the metallic zinc used in England, as well as in America. The language of the common or labouring classes, of this and the adjoining county, is a sort of lingo, which those unaccustomed to it cannot readily comprehend. A number of the men employed in working the lapis calaminaris, were assembled in the tap room of the inn at Langford. While engaged in conversation, I listened attentively, but could understand nothing at all of the subject of their discourse. Scarcely a word was intelligible. It is doubtless meant to be English, but is so disfigured by provinciality of accent and construction, as to require translation, to an American ear, as necessarily as the Irish or Welsh.

14th. At Bridgewater I was kindly entertained by a friend, with whom I had made some acquaintance in London. This town contains about 5,000 inhabitants. It is situated on the river Parrett, which empties into the Bristol channel ;

* Her sister has since paid the debt of nature.

his and, in common with the other streams connected with that estuary, it has a tide of remarkable height. It comes in, at low water, with what is called a bore ; that is, a sudden sweep from the channel, which at once raises the water of the river about six feet, at least at spring tides. A few such waves bring it to its highest elevation.

Bridgewater is of great antiquity. It was of considerable consequence before the Norman conquest. King John made it a borough by charter, in the year 1200. It has a spacious church, with the most lofty spire in this part of England.

My friend Ball, having occasion this morning to go as far as Taunton, to attend a meeting, twelve miles on my way, invited me to a seat in his phaeton. We had a pleasant ride through a flat, but well cultivated district. The cottages, by the road side, however, in this county, have not the appearance of much comfort ; and, in many cases, quite the reverse. They are built of mud or clay ; or, as it is called here, *cob*. It is nothing but plastic earth and gravel, mixed with cut straw. The thickness of the walls, is about a foot. Very few windows are to be seen in them, and the roof is uniformly of thatch. They have a heavy and gloomy aspect ; surpassing, I think, in their indications of poverty, the poorest log-houses on our frontier settlements.

Taunton is about a mile long, and contains 7000 inhabitants. It is a very respectable and ancient borough, having returned members to Parliament since 1294. Every inhabitant of the town *who boils his own pot*, has a right to vote. The voters accordingly receive the curious appellation of potwallopers or potwablonders. At the time of a contested election, it is no uncommon thing for the poorer inhabitants to have pots given to them, which they take out into the street, where they boil them in public, as an evidence of their title to a vote. The contents of the pots are, no doubt, sometimes derived from the pockets of the candidates.

After attending the monthly meeting, and spending an hour very agreeably with a number of friends, I took the coach to Exeter, through Honiton. The county of Devon, which we soon entered, is one of the largest in England, and perhaps the most productive, excepting only Yorkshire. Honiton, where we changed horses and coaches, is a place of considerable size and antiquity, though inferior in extent to Taunton. It consists chiefly of one long,

but wide and pleasant street. The houses are much more modern than in most of the country towns; having been built since a fire in 1765, which destroyed the greater part of the town. Its principal manufacture is lace. We arrived at Exeter before dark, and stopped at the old London Inn, a large house, and full of company, as were other public places, on account of the court which was then sitting.

15th. An intelligent young man, to whom I was introduced, offered to spend the day in showing me the town and neighbourhood. We went after breakfast to the cathedral, certainly one of the most celebrated and antique looking structures in the kingdom. It was begun by Leofric, the first bishop of Exeter, in the eleventh century, burnt in 1138, and finally repaired in 1194. Since that time, but still at a remote period, it has received various additions, so as to complete eventually the grand design of the first projectors. The length of the whole church is 390 feet, and the breadth 75. It differs exteriorly from most of the ancient structures I have seen, in the great number of statues placed in niches on the outside of the walls. Many of them are sitting, as in a chair, with one knee over the other. These statues are mostly intended as the representatives of royal personages, dignitaries of the church, angels, &c. Within is a library, fifty-seven feet by twenty-four, containing a great collection of books. The organ is supposed to be one of the largest in England, one of the pipes being fifteen inches in diameter. In one of the wings, or towers, is a curious astronomical clock, given by Bishop Courtenay in 1428. It is still going, and keeps good time, though erected sixty-four years prior to the discovery of America. It is conformable to the astronomy then in vogue, the earth being in the centre, and the sun revolving round it in a circle of about three feet in diameter. The changes of the moon are also represented by particular movements. The great bell of the cathedral, called the Peter bell, was given by the same prelate. It was brought from Landaff; and is said to weigh 12,500 lbs. It is about seven feet in diameter and the same in height. The hammer of the clock struck ten upon this bell, while we were on the tower in which it is suspended. The sound was like thunder to our ears. From the top of this tower we had an extensive view of the city, and the hills which bound it on different sides, with the windings of the Exe, which discharges its waters-

into the English Channel, at the distance of nine miles. The cathedral contains a great number of tombs and monuments. Those of the Courtenay family, hold a conspicuous station. The present inheritor of this ancient title and estate, was lately an inhabitant of the island of New-York, and is now in France, exiled, in consequence of his vices, from his native country. A gentleman with whom I travelled, told me he was in court when the indictment of the grand jury was read against him ; but he had then fled the country. There is here a finely executed cenotaph to the late Gen. Simcoe, by Flaxman. We were conducted through this cathedral by a female, who explained, with singular dexterity and correctness, the various things relative to which we wish to be informed.

We next visited the gaol and bridewell of Exeter. The buildings of these institutions are quite modern, and are constructed (especially the latter) on principles, intended to facilitate the management of convicts, and to promote their reformation. The design appeared to me much more favourable to these ends than that of common prisons, but the rooms are too small for the number of prisoners ; in consequence of which, classification (the basis of reformation) is prevented. In the bridewell, the convicts, consisting of those who are condemned for petty crimes, are kept at work. Beating hemp and polishing marble are the chief occupation for those who have not trades. Vagrants are likewise confined here. All those who work receive by law a certain portion of their earnings at the end of the week. Their food is twenty-two ounces of bread per diem, and half a peck of potatoes per week. If they choose to lay out their earnings in meat, they are at liberty to do it. Many of them, however, receive nothing but the bread, and yet they appeared to me remarkably healthy. Transportation is sometimes commuted for labour in this prison.

Intending to pass through Exeter on my return, I concluded to pursue my journey without delay, and took a seat at one o'clock in the coach to Plymouth, distant about forty-five miles. We followed the lower road through Newton-Bushel and Totness. Within nine miles from Exeter the road lies in view of the Exe, and passing over Haldon Hill, opposite the mouth of this river, the eye is gratified, from the top of that eminence, with one of the finest prospects I ever beheld. The river Exe, with the town

of Exmouth at its junction with the Channel, several other villages along its margin, and an extensive reach of cultivated country, swelling into high hills, and sinking into rich vallies, ornamented with woods, and orchards of fruit trees, with the city of Exeter and the tall spire of the cathedral in the rear,—can scarcely fail to induce the traveller to abandon the inside of the coach, and to walk leisurely over the hill. Totness is a considerable borough on the Dart, a river which is navigable for vessels of thirty or forty tons, as high as this place. The town consists of a single street three quarters of a mile in length, and contains manufactories of serge and other cloths. The situation of the town is picturesque and beautiful; but the narrowness of the street must very much diminish the comfort of those who reside in it. This is a fault very common in the villages of England; at least in those of the western counties. It is not unusual, as in the case of Totness, to pass through country towns composed chiefly of a single street, and that so narrow that two carriages cannot meet without some risk to the windows of the shops, and the bones of the people who are walking the street. Foot-walks are, in many cases, out of the question. We changed horses at Ivy-Bridge, a picturesque village on the river Erme, a narrow but rapid stream, which pours its water over a rocky channel, reminding me forcibly of the rivulets of our hilly districts in America; the bridge is a single arch of stone, covered with ivy. I arrived at Plymouth about dark, and after spending an agreeable evening with a friend for whom I had a letter, and finding that he was under a particular engagement for the next day, concluded to pursue my journey immediately into Cornwall.

16th. A hackney coach conveyed me to the Tamar, a broad river, or rather arm of the sea, which forms the principal harbour for ships of war. Here the great dock yard is situated, around which a town has been gradually built, which has acquired an extent equal to Plymouth itself. They are two miles apart, each containing about 30,000 inhabitants. The former is called Plymouth, and the latter Plymouth Dock; or in common parlance, simply, Dock. The ground upon which this large town is built, belongs entirely to Sir John St. Aubyn. When the present leases expire, the income of this gentleman, or of his heirs, will, it is said, be almost beyond calculation. Directly between these two towns, another has recently been built, called

Stonehouse. The three now form almost a continued connexion of streets and buildings. A great number of ships of war were lying in the river, at the time I crossed it. Some of these were of the largest dimensions now in use. We passed under the stern of the *Caledonia*, of 120 guns : and the *St. Vincent*, of the same size, was moored a few yards distant. The enormous bulk of these floating vehicles of terror and death, cannot fail to impress very forcibly the mind of a person not accustomed to behold them. The common estimate of the cost of a ship of war in England was formerly £1000 sterling per gun. But several gentlemen with whom I conversed, were of opinion it might now be stated safely at 12 or £1300. Each of the two last named ships, must, of course, have cost the government £144,000, equal to \$600,000. What an expensive game is this, which kings so often play at !

We landed on the west side of the river, where there is a small town called Torr Point. I took the coach for Truro, distant forty-five miles ; breakfasted at Lestard, a borough town of 2 or 300 inhabitants, pleasantly situated, and containing a number of genteel buildings ; and thence proceeded rapidly to Bodmin, one of the largest towns in the county of Cornwall. An asylum, for the insane of this county, has just been erected in this town, upon a new plan. It is not yet opened. The road to Truro is principally over barren hills and valleys, the soil appearing incapable of producing any thing but a little short grass. The few uncomfortable mud cottages of the peasants, sufficiently indicate the poverty in which they live. The weather to-day was very hot : and the roads dusty. It has been about six weeks since the last considerable rain.

Many inquiries are made of me relative to America, and the probable advantage of a removal to that country, on the part of those who find it difficult to obtain a living here. In my replies, I have endeavoured to discourage views of emigration, except of those who possess some capital, and sufficient enterprise and good conduct to manage it prudently ; or, of mechanics and labouring men, skilled in their professions, and of moral and industrious habits.

A letter to W. Tweedy, at Truro, a respectable banker, was attended with a polite and friendly invitation to his house, as a home, during my stay there. Refinement, intelligence, and piety, were blended in the character of this gentleman and his family,—materials which could not fail

to render the entertainment of the evening, as remarkable for its intellectual variety, as for the excellence of its hospitable board.

17th. Truro, though not very large, is a pleasant and busy town. My host conducted me this morning to a carpet manufactory, in which every part of the process, from the fleece to the carpet, is carried on pretty largely. Almost every kind of carpeting, from the most common and cheap, to the nicest Venetian, and the finest flowered Brussels, is here produced. I had scarcely a remote idea, prior to this opportunity, of the manner in which figures and flowers of the greatest variety of forms and colours, are woven into the texture of the most durable carpeting. The machinery is very complicated; but yet depending on principles or movements so regular, that a boy, in a short time, can understand how to perform one of the most essential and important parts of the operation. Five yards, I was told, of the flowered carpets, is a full days work for a man and boy. Beautiful rugs are also manufactured here. Those called embossed, i. e. with the figures raised above the surface, are executed with great ingenuity and skill. Baize is also here manufactured; and I was astonished on being informed by the manager, that the price for weaving it, (which is done by women,) is one penny per yard. "How many yards do they weave per day?" "Ten," was the answer. Broad cloth is woven double the width which it finally acquires, to allow for the shrinking.

We rode a few miles to see the process of smelting tin. The ore is mixed with one eighth of its weight of coal, and heated in a reverberatory furnace; "and when the tin melts," said one of the workmen, "we takes a rod or punch, and we taps the furnace, and it run out into the basin, where it cool, and then we lades it out into the moulds.*" The process is very simple. The tin, after it is discharged into the basin, remains in a melted state some hours before it is cool enough for the moulds. A pellicle of oxide forms on the top, and when this is removed by a stick, the fresh surface has the highest reflecting power that I have ever witnessed. The liquid metal is poured into cavities in stone, in masses of about 314 lbs. each, constituting the block tin. These blocks are examined by a commission appointed for the purpose, weighed and stamped

* I give this as an instance of the perversion of one of the rules of syntax, very common among the lower orders of people in the southern counties.

with the royal mark, paying a duty to the Prince Regent as duke of Cornwall. This duty is 4s. per hundred weight of tin; and is paid when the tin is assayed and licensed. The process is called the *coinage*, from the French word *coin*, a corner; because a corner of each block is chipped off at the office, and if it be found sufficiently pure, the blocks are stamped with the arms of the duke.

The annual revenue, arising to the Prince from the tin of this county, is about £10,000. The superiority of British tin, has, it is said, excited the cupidity of dealers on the continent, who melt it up with a portion of lead, a much cheaper metal, and then renew upon the blocks a counterfeit British stamp. The common block tin, however, of Cornwall, is by no means pure. The ore of the tin mines, is so intimately associated with portions of copper, lead, arsenical pyrites, and other metals, a small mixture will remain in the block tin, unless separated by a nicer mode of operation than that generally practised. Grain or stream tin, is the purest tin of commerce. This is smelted from the finest ore by charcoal; but the common block tin is smelted with pit coal or culm.

In the evening, my agreeable hostess accompanied me to the house of J. Williams, jr. her sister's husband, who resides nine miles from Truro. Their residence is a country seat, (Burncoose,) in a retired situation; but the manner in which they live is indicative of true taste, comfort, and independence. Being extensively concerned in the mines, and himself an excellent mineralogist, I had previously accepted an invitation he gave me in London, to make his house my residence while in this county.

LETTER IX.

Southampton, 7th month (July) 30th, 1818.

MY DEAR *****,

ON the morning of the 18th, mounted on good horses, my friend W. and myself set off to view some of the mines, of which there are several in his immediate neighbourhood. The face of the country in the mining districts, wears the impression of sterility and poverty. But agriculture here gives way to the more productive treasures that are profusely lodged beneath the surface. The prodigious masses of earth and rubbish, brought out of the mines, and thrown in vast heaps around the pits, give to the

perspective of this hilly country, an appearance, which might suggest the idea of its being the grave yard of all the giants. We went to the *united mines*, of which my conductor is one of the proprietors and managers. The produce of these mines is principally copper, and the annual expense of their operations is about £70,000 sterling. My friend having business of some urgency at the counting-room, put me under the care of Captain D., one of those to whom is assigned the immediate superintendence of the operations of the miners. These men have generally been brought up as miners, and having attained to this station by their stability and good conduct, they are then called captains. I did not think it prudent to venture down into any of the mines. Some of my friends, who had experienced the excessive labour and fatigue, and the great exposure to dampness, which must be encountered in such a subterranean journey, advised me against it. I could readily conceive, that to descend a ladder, or a succession of ladders, placed perpendicularly, for 500 or 1000 feet; to creep through passages from which the light, and the pure air of the hills are for ever excluded; to become thoroughly soaked with water impregnated with copper; to be stunned with the noise and reverberation of the blasts of gunpowder, used in splitting the rocks; and, what is worse than all, to climb up again, must require an effort for which long practice, or great strength of muscle, could alone provide. Yet had my health been robust, or even unimpaired by indisposition, curiosity would have prompted me to make the trial. As it was, I thought it best to content myself with witnessing the descent, into one of the pits, of a bucket in which was placed a lighted candle. It continued visible until the bucket changed its direction, the light appearing like the reflection of a star, as deep in the bosom of a lake, as its position in the celestial vault could possibly make it.

The ore is raised from the mines in buckets attached to ropes, which, turning over a pulley, wind around a cylindrical box, about fifteen feet in diameter and eight in length, placed with the axis of the cylinder in a vertical position, and supported by an upright shaft, at some distance from the ground. This shaft, and of course the whole cylinder, is turned by horses, like the grinders of a cider-mill. They are called whims, and are frequently placed at a considerable distance from the pit, the rope being extended for that purpose, and supported by frames and rollers. As one

bucket descends, another ascends. The pits, in which the workmen descend to the mines, are generally distinct from those in which the buckets move. The whims are sometimes moved by steam, and I believe there are instances, in which the men ascend and descend by the same shaft or pit through which the ore is raised.

The principal metals, for which the mines of Cornwall are worked, are copper, tin, lead, silver, and cobalt. The two former are by far the most abundant. Others are likewise found; particularly iron, zinc, gold, arsenic, antimony, manganese, uranium, molybdena, titanium, nickel, and bismuth. The metals are found in veins, or, as the miners term them, lodes, or loads. This term is supposed to be an old Anglo-Saxon word, implying *lead*, (thus loadstone means leading-stone,) the miner being *led* by the vein of metal to pursue it in whatever direction it may carry him. Others suppose the term to mean, the burden or *load* of the metalliferous vein.

Neither copper nor tin is found, in Cornwall, in layers or beds. The latter, indeed, is found in streams and vallies, in loose, detached, and generally in rolled or rounded masses; but these are considered by all as alluvial deposits, broken from the original veins, and brought down by the force of water; whence they acquire, by friction, their smooth and rounded surface. The places where this kind of ore is obtained, have been called stream works.

The direction of the lodes or veins is generally east and west. They are not entirely vertical, but inclined more or less to the north or south. This inclination is called the *underlie of the load*. When two contiguous veins incline toward each other, and meet under ground, they are generally found to be much poorer, at, and after their junction, than before. But when their inclinations are in the same direction, but one of them is so much more rapid than the other as to overtake it, they are found after their junction to have increased in richness. They vary much in width, from a few inches to thirty feet, but generally from one foot to three feet. Their depth is not known; as few instances have occurred in which they are not continued downward, until it no longer answers the owner's purpose to pursue them; the increased expense, on account of the depth, not being compensated by the profit. The deepest mine in Cornwall (Dolcoath) is about 1360 feet. The extent of the veins east and west, has not been ascertained, and there are

reasons for believing that some of them pervade the county, and probably form continued and connected courses into Devon and Somerset. That they extend westward to the ocean, and advance to unknown distances under the sea, is well known.

“ The mine of Huel Cock, in the parish of St. Just, is wrought eighty fathoms in length under the sea, below low water mark ; and the sea in some places is but three fathoms over the back of the workings, inasmuch that the tinners underneath hear the break, flux, ebb, and reflux of every wave, which upon the beach overhead, may be said to have had the run of the Atlantic ocean for many hundred leagues ; and consequently, are amazingly powerful and boisterous. They also hear the rumbling noise of the nodules and fragments of rock, which are continually rolling upon the submarine stratum, which altogether make a kind of thundering roar, that would surprise and fearfully engage the attention of the curious stranger. Add to this, that several parts of the lode, which were richer than others, have been very indiscreetly hulked and worked within four feet of the sea ; whereby, in violent stormy weather, the noise overhead has been so tremendous, that the workmen have many times deserted their labour, under the greatest fear lest the sea might break in upon them.”*

One mine, namely, the Wherry tin mine at Penzance, is worked entirely under the sea. Even the shaft or descent into the mine, is through the sea, the water being kept off by iron cylinders, from the top of which a platform extends to the shore, of more than 100 yards in length, over which materials are conveyed to and from the mine.

The lodes frequently approach the surface of the ground. These metallic veins vary extremely in the nature and value of their products. Besides copper and tin, other metals are found in different parts of the same vein ; nor do the metallic contents of the lode constitute the principal or prevailing part of the mass. Hence the veins are not distinguished, by the miners, by the name of the ore for which they are wrought, as the copper-lode, or a tin-lode, but they are designated according to the substances which predominate in them. Hence the miner has a nomenclature of his own. The most frequent accompaniments of metals in the veins of Cornwall, (termed by mineralogists the gangue or matrix,) are ferruginous or silicious.

* Bryce's Mineralogia Cornubiensis.

clay, of a loose texture, (the *gossan* of the miner,) quartz and fluat of lime, (*spar*,) iron pyrites, (*mundick*,) chlorite, (*peach*,) a very loose whitish or bluish clayey substance, (*flucan*,) blende or sulphuret of zinc, (*black jack*,) and gravel, or decomposed granite, (*grouan*.) But the composition and quality of veins vary very much in different parts and at different depths; so that, without sinking thirty, or even sixty fathoms, a satisfactory decision cannot be made of the value of the lode. The pursuit, therefore, of a lode, is absolutely an affair of enterprise. It may lead to wealth, or to ultimate and immense loss. The longest experience and the greatest ingenuity, are often entirely insufficient or delusive; so uncertain are the symptoms of a lode. In the great copper mine of North Downs, no less a sum than £90,000 was lost; and in other instances, a greater sum has been gained, by pursuing lodes which have been declared, by men of experience, to promise no advantage. Still the miners are obliged to exercise their judgments; and their experience leads them to believe, that certain kinds of gangue are more favourable indications of metal than others. In conformity with this experience, it is a common saying, that "black jack rides a proud horse;" implying that blende is often found to lie above, in a rich vein of copper beneath. The first workings of a mine sometimes afford a different kind of metal from that which predominates at a greater depth. The mines of Huel Unity and Cooks' Kitchen, were at first worked for tin; but this was soon exhausted, and gave place to copper: but in the latter mine, after working to the depth of 180 fathoms, tin was found again, and has continued down to the depth of at least 210 fathoms.

A mine is only a shaft, or shafts, dug down into the lodes. In the united mines, there are twenty or thirty working shafts, which descend, within the compass of less than two miles, into ten or twelve lodes and branches of lodes. The shafts are sometimes nearly perpendicular, but commonly incline. They never shift horizontally. Several lodes are sometimes connected with one shaft by cross cuts, about ten fathoms one above another.

To get clear of the water which continually passes into the openings made by the miner, is a work of great labour and importance; and in this his reliance is upon the steam engine. These engines are very large; some of them being equal, according to the usual computation, to the power of

1000 or 1200 horses. The water is raised from the mines by the engines, not to the surface of the ground, but to subterraneous passages, dug expressly for the purpose of carrying it off to the side of a hill or valley. These passages are called adits. As the country is hilly, they are not in general of any great length, seldom more than half a mile, though occasionally much longer. There is one which conveys the water of several mines into the same channel, and discharges it into one of the creeks of Falmouth harbour; which, calculating its various turnings and branches, is about twenty-four miles in length.

Beside the veins of metalliferous ores which take the general direction of east and west, there are others which intersect them in north and south courses. These are technically called cross courses, and are seldom valuable from their contents. They vary from half an inch to a few feet in width, and in some tracts are of very frequent recurrence. They are filled chiefly with quartzey, clayey, or ochreous substances, accompanied by the *flucan* of the miners. These cross veins are of use, however, in preventing the water of the neighbouring country from troubling a mine, but they often occasion very serious perplexities to the miner, by the disturbances which they have produced in the metalliferous veins. The latter are sometimes *heaved* by the cross courses, so as to be found, after the interruption, several feet, or even fathoms, north or south of their regular track, and occasionally they are broken into strings or branches. These disturbances of the metalliferous veins, are thus attended with loss and vexation to the operator.

The effect of the *heave* is sometimes very remarkable. In the mine of Huel Peever, after losing the direction of the lode, in consequence of a *heave*, about *forty years* were spent in searching for it, and it was at length discovered.

Though the cross courses, or north and south veins, are rarely metalliferous, there are some exceptions. Tin and silver, and a few other metals, have been sometimes found in them. In one mine, the silver thence obtained, amounted in value to 8 or £9,000.

To facilitate the workings of the mines, passages are cut from one lode to another, (for these lodes run parallel to each other, at variable distances,) so that the interior of the mines has a considerable resemblance, as the captain who conducted me remarked, to the streets of a town, crossing and intersecting each other in various ways. "If you fancy

one town to be placed immediately over another," said he; "you will have a just idea of the workings of the mine."

When large veins are excavated, it becomes necessary, very often, to support the sides or walls, to prevent them from falling in. This is generally done, by placing strong timbers across the vacuity. But so great is the pressure, in some instances, that, notwithstanding the employment of the greatest skill, and of vast labour and expense, the frame work is found insufficient to resist it. In the mine called Huel Alfred,* one of the veins, which had been hollowed out about one hundred fathoms in depth, eighty fathoms in length at bottom, thirty above, and from nine to twenty-four feet wide, gave way, and many thousands of tons came down in an instant. Seventeen men, who had been working in the very place where it fell, had fortunately left it half an hour before the accident. The whole mass has been supported, and they are now working beneath it. The walls of the lodes, are, however, more generally, perhaps, supported by what the miner calls *deads*; that is, substances which are not worth removal from the vein.

Carburetted hydrogen, or fire damp, is not generated in the mines of Cornwall, as in coal mines; neither are the miners subject to any great exposure, from foul air of any kind. The pyritic substances, consisting mostly of sulphurets of iron and copper, discharged from the mine, and which go by the general name of mundic, poison the water to such an extent, as to destroy the grass over which it flows, and very much to injure the fertility of the soil. The miners have to bring the water, used in their families, often from a great distance, in wheel-barrows, over the hills. The sorting, sifting, pounding, and washing the ore, are operations performed very much by women. It is exceedingly laborious; but they become accustomed to it, and do not hesitate to engage in it. Indeed it is singular, that, although the business of mining presents such a continued series of the most toilsome, exposing, noxious, and even dangerous operations which men can engage in, the miners are seldom disposed to leave it for any other. They prefer it to agricultural labours. The truth is, it brings them together, makes them acquainted with each other, and produces a kind of *esprit de corps*, which is perhaps one of the most powerful principles of human action. Besides, those who are engaged in the body of the mines, work but

* Huel, in the Cornish dialect, signifies a mine. It is frequently, though erroneously, spelled Wheal.

eight hours in the twenty-four. There are of course three sets, who relieve each other as regularly as sailors in a ship at sea. They perform their work generally by the piece, or they will do it for a certain share of the produce of the ore, but they seldom work by the day. They are often subject to great losses by this mode of working, sometimes sacrificing not only the whole of their labour, but incurring an actual debt for tools, gunpowder, &c. The same mode of labour, it is true, yields at other times a much greater profit than they could possibly gain in working by the day; and such is the hope inspired by occasional success in this kind of subterranean lottery, they too often prefer to make the delusive hazard, than to accept of moderate and certain wages. Most of the miners, it is to be feared, live in poverty. The state of morals among them was, some time ago, very low. Irreligion, profanity, and dishonesty, were the prevailing traits of a miner's character; and the neighbourhood of the mines could scarcely be considered as a place of security, for an independent gentleman or farmer. The case, however, is now greatly altered for the better. A very salutary reform has been produced, in a great measure by the efforts of the Methodists, in establishing meetings among them. The introduction of the Bible, and the extension of education, have had their effects, though it is still to be feared that the education of their children is too much neglected. The miners are considered, in point of shrewdness and intelligence, as superior to the class of ordinary labourers.

When the defective education of the miner is considered, together with the dark and dismal abode in which he spends so much of his time, it is not surprising that he should be superstitious. To this source must be ascribed many of his particular fancies and predilections, connected with his employment. Some of them imagine that they hear, while employed under ground, another pick at work, and which they refer to the agency of an evil spirit, which they term a *Piskey*, or small man. It is esteemed an omen of a most favourable kind, inspiring them with the full belief, that a good course of ore is near at hand. The illusion is, in all probability, referable to a reverberation of sound, from some incidental cavity of the mine. The use too of the divining rod, (*virgula divinatoria*,) in the discovery of veins, and which is still credulously practised, must doubtless be attributed to the same cause.

We dined in company with eight or ten captains of the mines, at the house in which they transact their business,

on a fine cut of roast beef, and good wine. After visiting the mine called Wheal Unity, we took tea at Scorrier, the residence of my friend's father. The mineralogical cabinet of the former still remains here. It fills a large room, and certainly contains some of the finest and largest specimens of the metallic kind I have ever seen. They are mostly from the mines of Cornwall, and the variety which they exhibit, is truly surprising. This collection, however, is rich in foreign specimens, and if not quite so general as some others, it is, on the whole, as a private collection, unusually extensive and valuable.

In a general point of view, the geology of Cornwall, so far as it has been well examined, is sufficiently simple. A broad, but not an elevated range of granite, extends in the direction of N. E. and S. W. from near the centre of Devonshire, (the adjoining county,) through the middle of Cornwall to its western extremity. Upon this granite, on each side of the central ridge, reposes a stratum of clay slate, the killas of the miner. The granite is, in some places, in a state of decomposition, and thus affords excellent materials for the manufactory of porcelain. The feldspar forms two thirds of the mass, in which crystals of quartz, and scales of mica are embedded, together with crystals of a compact earthy feldspar. The clay slate is evidently stratified. On the north side of the county, it yields roofing slate of an excellent quality. It is in those two substances, granite and clay slate, that the metalliferous veins extend, which have contributed so much to the prosperity of English manufactures, and which render the county of Cornwall one of the most distinguished mining districts in the world.

The granite and slate are found, in some parts of the county, to alternate with each other, in a very remarkable manner, so that it is impossible to say in which of these some of the mines are situated. But this is probably the case more particularly with those mines that are at the foot, or in the immediate neighbourhood of granite hills. In some of these cases, if not in all, the granite shows an evident tendency to decomposition. They both vary extremely in hardness. The granite, when beginning to decompose, is so crumbly as to require that the adits or levels should be lined with boards close to each other; but in other situations, it has a hardness almost equal to porphyry. And with respect to the schist, it may be mentioned, that, in sink-

ing two shafts in one of the most noted mines, about fifty fathoms from each other, the pay to the miner, was, in the one instance, £55 per fathom, and in the other but £5.

Both granite and schist contain veins or lodes of tin and copper. The latter metal, however, is far more commonly found in the slate formation. Indeed it was considered, until within the last fifty years, a hopeless case to think of finding a vein of copper in granite, or gowan, as it is termed by the miner; but later experience has proved, that lodes containing copper, are found in granite. These two metals constitute, as I have before mentioned, by far the most productive part of the mineral riches of this remarkable county.

Cornwall is, without doubt, the most productive tin country in the world. It has been distinguished for its mines of this metal from the earliest periods of authentic history. The Phœnicians, according to Strabo, extended their commerce beyond the pillars of Hercules, and discovered the *Casiterides*, or Tin Islands; and, for a considerable length of time, kept their foreign treasure concealed from the prying curiosity of the Greeks and Romans. In one instance, the same author states, that the captain of a Phœnician vessel, returning from Britain, seeing himself pursued by a Roman galley, chose rather to run his vessel among the rocks, than the Romans might experience a like fate, than to be the means of discovering so valuable a commerce to the enemies of his country. The Phœnicians are said to have enjoyed this trade for about 300 years. It is uncertain what use they made of the tin; but as it is now known to be an important substance in the art of dying, it seems probable that it was used by them in perfecting the purple and scarlet, for which some of the cities acquired so much fame. The manufacture of ancient brass (a mixture of copper and tin) may also have consumed no inconsiderable share. After the conquest of Britain by the Romans, the mines of Cornwall became the undisturbed property of that people, until the subversion of their empire in the west. In proof of those ancient operations in the tin mines of this county, there have been found, it is said, picks and other tools of a peculiar construction, together with large pieces of timber, far beneath the surface. But as these old workings were effected without the aid of gunpowder, and the equally important agency of the steam engine, they came vastly short of the present extent, productiveness, and importance of the existing system of mining operations.

The only metal sought after in these mines, until about the commencement of the last century, was tin. The copper ore, which must, from the earliest period, have been found in considerable abundance, was considered as worse than useless.

It appears, from a statistical account of the mines, that the whole quantity and value of tin raised in Cornwall and Devon, during the eighteenth century, was about 24,000 tons, amounting to £1,240,000. The produce in tin has rather declined since the year 1800; but this has been more than compensated by the rapid increase in the quantity and value of the copper. This metal being much more difficult of reduction than tin, the smelting of it was for a long time in the hands of very few companies. Neither the miners, nor the great consumers of the copper, were the smelters of the ore; and thus was prevented that salutary competition, which tends so essentially to animate and to foster the progress of the useful arts. So late as 1745, or 1750, copper tea kettles, sauce pans, and pots of all sizes, were imported largely into England from Holland and Hamburg. But in about forty years after, so great was the spirit of enterprise, in relation to this branch of national industry, the export of different articles, in which copper formed either the whole or principal ingredient, amounted to an extensive branch of trade, even to those countries on which England had before depended for a supply. In the year 1791, the value of exported copper, and of brass and plated goods, was more than £500,000 sterling. In the last seventy years of the eighteenth century, the annual produce of this metal, from the Cornish mines, had increased from 750 to 5427 tons; and the value of this single article, had augmented from £47,350, to about £600,000 a year; and in the next eight or nine years, half as much more was added to the quantity, and more than that proportion to the value.

In the year 1805, owing to the flourishing state of the export trade, the value of copper rose so rapidly, as to reach the unprecedented price of £180 per ton, to the miner. In consequence of this stimulus, the mines of Devonshire and Cornwall yielded, in that year, more than 7000 tons of fine copper, amounting to £1,260,000. The price has since experienced great fluctuations, occasioning, at times, serious embarrassments, and great loss to the adventurers. As a branch of national skill, industry, commerce, and

wealth, the value of these mines are of immense importance, whatever may be the partial losses of individual companies.*

The mines of tin are evidently on the decline; though still sufficient to supply, in abundance, this useful metal. The principal part, is at present obtained from the western extremity of the county. When these are worked out, it is not improbable that the high plains of Dartmoor, in Devonshire, an extensive granitic tract, and which has been much less explored for mines, than Cornwall, may afford a seasonable and ample supply.†

21st. I accompanied my friend Williams this morning to Falmouth. This town contains upward of 4000 inhabitants. It is situated at the mouth of the river Fal, which near its embouchure forms a bay, that affords one of the finest harbours in the kingdom. The departure and arrival of the packets to all parts of the British dominions, and the trade in timber, iron, &c. for the mines, constitute the chief sources of activity and interest at this place. The town consists, mainly, of one long street, which is so narrow that two carriages can scarcely pass each other. There is not a house in the whole street, in which a comfortable Philadelphian would wish to live, excepting that of R. W. Fox, the American consul, which commands a fine prospect of land and water. With this gentleman we dined. He received his commission, as consul, from General Washington; and is, if I mistake not, the only remaining consul in England, who is not an American. He is a member of the society of Friends, intelligent, and greatly respected, and though advanced in years, is still very active. He has a large and interesting family.‡

23d. I prepared this morning to leave my Cornish friends, whose house had furnished me with an excellent home for nearly a week, and whose society and conversation, had caused the time to pass away most pleasantly and instructively. The recollection of my visit to Burncoose, like that at Bristol, will ever continue to afford me the most

* In the year ending June 30, 1832, the quantity of copper raised in Cornwall, was 9140 tons, and in other parts of Great Britain, and in Ireland, 1704 tons. The average price of copper was 106*l.* 15*s.* per ton. The ores yielded 81·2 per cent. of metal.

† In the six months preceding June 30, 1832, the quantity of ore raised from sixty-seven mines in Cornwall, amounted to 52,125 tons. *Annals of Philosophy.*

‡ In the foregoing statement of the geology and mining operations of Cornwall, I have availed myself liberally of the valuable little work of my friend W. Phillips, on the Geology of England and Wales. A new and enlarged edition of this work, the joint production of Phillips and Conybeare, is now, *in part*, before the public.

§ This worthy man is since deceased: his son, R. W. Fox, is his successor in the consulate.

lively satisfaction. In that spirit of true friendship, which bids welcome to the coming and speed to the parting guest, I was furnished with a gig to Truro, and a man on horseback to bring it back. While in this town, I had an opportunity to visit the rooms of the Philosophical Institution lately established, in company with its two secretaries. This institution, though opposed in its interests by another at Penzance, has made a respectable progress. It possesses a good variety of philosophical apparatus, and a handsome collection of minerals. In the cabinet is a single specimen of carbonate of lead, from one of the mines of the county, which is valued at £27 sterling,—a proof of the great importance attached to fine specimens, even in the vicinity of the mines which produce them. So well do the miners themselves know how to estimate the value of rare or fine pieces, and so numerous now are the collectors and purchasers of minerals, even the proprietors and managers of the mines, cannot easily obtain from the workmen specimens of particular beauty or interest, without paying well for them.

I dined at W. Tweedy's, in company with a clergyman of Redruth, a sensible man and a philanthropist. He ascribed much of the depravity of the lower orders of people in the west of England, to the habit of drinking. In the town of Redruth, which contains about 6000 inhabitants, he stated that there were thirteen tipling houses, which he considered as truly enormous. Yet I could have informed him, that they might have fifty or sixty of these houses, without exceeding the number, in proportion to their population, which is known to exist at the present time in New-York.

The town of Truro is finely supplied with water. It is brought from an eminence, and is conducted along an open space to the side of the town, where a portion of it is let off into the streets, through many of which it flows in a constant limpid stream, affording, in addition to domestic convenience, great refreshment and coolness in hot weather.

24th. Left Truro at eight, in the mail for Plymouth, but by a route different from that by which I came. We passed through Probus, a small village, near which are several beautiful seats and grounds of men of wealth, and of course, men of influence, constituted as this government is, and resting so securely on the basis of pounds, shillings and pence. But although the liberality of these country gentlemen is almost unbounded, when the purposes of a

borough election call for it, they have not all the reputation of generosity on ordinary occasions. I was informed by a respectable looking person in the coach, that on the gate of a spacious and elegant mansion, which we had then in view, a placard was once fixed with these lines,

A large park, but no deer,
A large cellar, but no beer,
A large hall, but no cheer,
Sir *. ***** lives here.

Grampound, a small village, is a borough town, sending two members to parliament, and reckoning within its limits not more than twenty-five voters ! Cornwall has a pretty full share of these rotten boroughs. They must each of them have a mayor, alderman, recorder, town clerk, &c. The mayor of Grampound, I am told, is a shoemaker ; but when once raised to this high office, Crispin would, doubtless, be as likely as any other man, to think of its dignities ; and it would be indecorous to address him by any other title than that of " your worship."*

St. Austel, another town on our route, contains about 4000 inhabitants. They subsist chiefly by the pilchard fishery, by mining, and the manufactory of serges. The great tin mine of Polgooth is in the neighbourhood ; and one of the principal stannary courts, (the court which decides upon the coinage of tin, and authorises the royal stamp to be put on each block,) is held here. It is remarkable that this mine is so rich in tin, that even the cross courses, almost universally, as it is said, produce that metal.

We arrived at Torr Point on the river Tamar, toward evening, having passed through Leskard, and some other towns of less note. Here I took leave of Cornwall, the Tamar being the line of separation between this county and Devonshire.

Notwithstanding the frequent occurrence of extensive downs or barren hills, the ride this day has been very interesting. The grain in most places was nearly ripe ; and in some fields the harvest had commenced. The contrast is very great between the highly improved grounds and stately mansions of the large landholders, and the miserable mud cottages of the poor. Some villages are composed almost entirely of these cob cottages, covered with straw. The country being very hilly, and the fields generally small, and intersected by green hedges, the eye sometimes takes in, from the most elevated points on the road, a hundred

* This borough has since been disfranchised by parliament, for a gross abuse of its privileges.

of these fields. The absence of extensive woodlands, and the very numerous enclosures, over which the eye ranges, give to some parts of the country, at least in the view of an American, the appearance of a great garden. I observed several plantations of small oak trees, and some of pines.

The roads in Cornwall, as well as in Devonshire, are generally very narrow. The fences, in many parts, are stone walls, or more generally, a low wall built upon a high bank of earth. Hedges, however, are numerous, and interspersed as they are with evergreens, they afford an almost perennial verdure; while the flowers, which adorn the banks on which they grow, regale the senses of the traveller, and beautify the prospect around him.

The antiquities of this county are numerous. Rude monuments of large stones, arranged in a particular form, and without any appearance of architectural skill, are to be found in many places. They are denominated druidical circles, karns, or cromlechs. Their origin is unknown. There are many Roman relicks; and the remains of some of the old baronial castles are considered as among the most magnificent ruins in the kingdom. This is said to be the fact very particularly with regard to Restormel Castle, in the neighbourhood of Lestwithiel, the residence, in very early periods, of the earls of Cornwall; but my time did not admit of a digression to this venerable ruin.

I ought not to leave Cornwall without an acknowledgment, that the inhabitants appeared to me, as far as my intercourse with them extended, to possess rather an unusual degree of intelligence and hospitality. If personal beauty, too, be necessarily connected with rosy cheeks and florid complexions, the females of this part of England are entitled to a pre-eminence in personal charms. Every traveller must be struck with the appearance of almost universal bloom, even among the inhabitants of mud cottages, the female inmates of which, scarcely fail to place themselves at the door, from motives of curiosity, (I can hardly think of vanity,) when the passage of the stage coach is announced by the rattle of the wheels, or the sound of the driver's bugle. Education is an object of pointed attention and zeal, in many parts of the county. Sir Humphrey Davy is a native of the western part of Cornwall; and there received those early impulses which have placed him in so high a rank in the science of his country.*

We crossed the Tamar, once more, among the immense

* Now president of the Royal Society.

floating batteries, which there lie in ordinary, and upon getting into the dock, I found there was no way of reaching Plymouth, without waiting longer than I wished, but to use my feet. A porter slung my baggage on his back, and we walked the two miles through fortifications, over bridges, and along streets, filled with limestone dust, to the Commercial Inn.

35th. Having breakfasted with a friend, (W. Pridenax,) who, knowing of my intention to be at Plymouth to-day, had made an arrangement to go with me to the most interesting places in the neighbourhood, we directed our steps to the Dock Yard. In our way we passed through the market of Plymouth. Its construction is different from any I had seen, and it appeared to me to be exceedingly judicious. The space allotted for the market is surrounded by a high wall, with gates of sufficient width for carts and people. Along the wall within, are shops for the butchers, with a fire-place and chimney in each, large enough for cooking breakfast. Their wives and daughters assist in the operations of the shop, weighing the meat, changing money, &c. These shops have an appearance of great neatness and comfort. The vegetable market is on the area, either under suitable sheds, or on the open ground. One side of the wall is appropriated to fish, having a wide roof extending over it, and suitable fixtures for carving and weighing the fish, with seats for the fishmongers. The variety of species, which the Plymouth market affords, especially of such as are unknown in those of the United States, excited my surprise. I desired my companion to give me the names of the different kinds which were then on the stalls. The following is the list:—Cod, whiting, whiting pollock, bream, turbot, sole, (of which there were three kinds,) hake, red gurnet, grey gurnet, plaice, john dory, red mullet, ling, ray, longnoses, conger eel, fresh water eel, mackarel, horse mackarel, piper, tub, dab, scollop, smelt, crabs, lobsters, crawfish, cockles, prills, and muscles. These, of course, were only the fish of the season. The size of the crabs is much greater than any I have ever seen in New-York. One of them, with only one claw, weighed seven pounds. The conger eel grows to an enormous size.

There were several in the market five or six feet in length, and seven or eight inches in diameter. My conductor bought the half of one which weighed fifty-six pounds; the price, three halfpence per pound. The flesh is very white, and when properly cooked, extremely savoury, especially in a pie, as I afterward ascertained at the dinner table.

The market at the dock, afforded the same variety. The market-house, at that place, for the purpose of economising room, has been made two stories high ; and the plan appeared to be really convenient. The steps to the upper floor are wide and easy, and the articles exposed for sale, in that part of the market, are of light carriage. Poultry and butter, are sold there, and no where else. My friend endeavoured to procure me an admission to the Dock Yard, by a special request, contained in a letter to the Commissioner ; but, finding I was an American, he replied by a note that he had no authority to admit me. Thus was I disappointed in one of the most interesting objects of a visit to Plymouth—an inspection of the vast operations carried on within the Dock Yard, conducted, as they are, by the concentrated skill and science of the nation.

This yard is very extensive, but not more so than that at Portsmouth, at which place I hope to be more successful. The whole area of the yard, except on the water side, is surrounded by a high wall. The gate is fortified, and armed centries are constantly stationed at it. The workmen were going to dinner while we were there, pouring through the gate in a dense stream, which continued a great length of time. The number generally employed in the yard, I was told, is from 2500 to 3000.

Taking a boat, we crossed the river to Mount-Edgcombe, to view the seat and grounds of the earl of Mount-Edgcombe. The natural advantages of this ancient residence of nobility, in point of prospect, and beauty of situation, can hardly be surpassed by any in the kingdom. The towns of Plymouth, Stonehouse, and Plymouth Dock—the villages of Torr-Point and Saltash—the fleet riding in the river—the busy scenes in the Dock Yard—the high hills, and the cultivated fields of Cornwall and Devonshire—the Break Water, Eddy-Stone Lighthouse, and the wide expanse of the sea, are all presented to the eye, from various points of this delightful eminence. Art has not been wanting to embellish the features of nature. The mansion-house, however, has nothing remarkable in its appearance. The park is very extensive, and contains an abundance of deer.

In a retired spot, in these grounds, a favourite pig of the dutchess was buried, and a monument erected to its memory. The coat of arms of the family, happen also to contain a pig. The King and Queen once visited Mount-Edgcombe,

and on coming to the pig's grave and monument, the Queen asked the King what it was. "A family vault, Charlotte, a family vault," was the witty answer of his Majesty.

Having engaged the boatman who brought us over, we left Mount-Edgumbe to visit the Break-Water. This is a stupendous undertaking, commenced about seven years ago, for the purpose of checking the violent incursions of of the sea, upon the town and harbour, during the prevalence of storms. It was no less a scheme, than that of erecting a barrier of stones, in the middle of the bay, which at that place is five miles wide, and at a distance from the town of about three miles. They have already thrown in a quantity sufficient to raise a ridge a mile long, and have brought it, the greater part of that distance, above high water mark. This pile is 2 or 300 feet wide at the base, and thirty feet at top. The stones are quarried about five miles off, brought in very large blocks, and placed, by means of machinery, in the position desired. The cost of this undertaking, which is the business of government, is usually estimated at a million sterling; but one of the best engineers in the country, told me it might more properly be stated at £1,200,000. About 200 men are constantly employed upon it, and such is their expedition, that 22,000 tons of stone, have been removed to the spot in one fortnight. The appropriation, by government, to this object, is 60 or £80,000 a year. We ascended the top of this pile, by regular steps, and walked upon a broad and smooth surface to a considerable distance. The whole mass is of limestone, and although no cement is used, it is believed it will become sufficiently solid, by the penetration of small shell fish into the cavities. Its effects upon the water were very obvious. The bay, on the side of our approach, was calm; while on the other side, the sea was raging boisterously.

It costs the British government a vast sum of money, annually, to prevent smuggling; and yet great numbers, both on the English and Irish coast, depend upon it for a livelihood. The crime, it would seem, does not consist so much in the commission of a clandestine act, as in being caught at it; for I was informed, that a noble admiral, now in high favour, when he was simply Sir *. ***** , and commander of a frigate, once sent on shore in the night, on his arrival from the East Indies, twenty-seven boat loads of valuables.

The last boat, and only the last, was seized, and this happened to contain some things which he had promised to get on shore, if he could, for some of the young officers in India, as presents to their sisters, &c. - It is not very uncommon either, as I was credibly informed, when a revenue cutter approaches a ship in the evening, to invite the captain of the cutter on board of the ship, take him into the cabin, and by dint of kindness, and excellent liquor, to put him *hors de combat*, for the night. The sailors of the cutter can then be managed in a certain way, and the business of "*watering the ship*," settled to the satisfaction of the regular trader.

26th. I took a seat in the Balloon Coach for Exeter and passed through Ridgeway, and Ivey Bridge, and diverging from the road along which I had before travelled, stopped at Ashburton to dine. This is said to be one of the neatest towns in Devonshire. The river Dart runs within a few miles of the town; and at the distance of two or three miles from the road, is Dartmoor Prison, of so much celebrity as a place of strong confinement for prisoners of war. The moor, or waste land, called Dartmoor forest, comprises upwards of 80,000 acres. It affords only a scanty pasturage for a few thousand sheep and cattle. Efforts are making, in some places, to bring this barren into cultivation. Considerable quantities of peat, for fuel, are obtained from different tracts of this moor.

Exeter. Being joined, soon after my arrival here, by my former obliging cicerone, we employed the time industriously in walking, and viewing some of the exterior attractions of this ancient city. Some parts of it are delightfully pleasant. A high hill, called *North-Hay*, covered with majestic trees, and quite within the town, affords a beautiful promenade and retreat in warm weather, and is quite a romantic place, on account of its height, its steepness, and the walks along its declivity.

On visiting the house of J. Green, a gentleman who resides a short distance from the town, I was invited with so much kindness to remain with them, as to induce me to accept their hospitality. We had before met each other in London.

27th. We rode this morning to a mine of manganese, about three miles distant, and examined the manner of working the ore. The process, which is very simple, is performed by common labourers, a number of whom are women. The ore is assorted by the hand, washed, sifted, and

reduced by pounding, to different degrees of fineness, according to the purpose intended. The neighbourhood of Exeter affords large quantities of this mineral, which, from its more extensive use in manufactories, has so much increased in value, that the workmen are now going over the former rubbish of the mine, and selecting portions which were before rejected. Returning to town, we visited the Literary and Philosophical Institution, which occupies a very good building; one apartment of which contains a handsome library: another is arranged for a lecture room; but not much has yet been done to communicate instruction by that means. A foundation is laid for a cabinet of minerals, and a few curiosities have been collected, as the commencement of a museum. An excellent reading room is also included.

We proceeded thence to the hospital, and went through the different wards, under the guidance of a clergyman, who was one of the managers. This hospital has been in operation seventy-one years. It contains accommodations for 140 patients, and is generally full. Great attention is paid in this house to bathing; and for the greater convenience of using water freely, there is a well in the cellar, with a forcing pump in the basement story, by which water is easily driven through pipes into reservoirs fixed in the upper rooms. This kind of accommodation, which, in warm weather, at least, may be considered as a domestic luxury, I have found to be rather common in gentlemen's houses. In a small recess, in the entry or hall of the first floor, and sometimes in each of the principal chambers, or perhaps in a passage into which the chambers open, a basin is fixed, in masonry, with an opening in the bottom, closed by a cork, or other stopper, and over the basin a stop-cock. By the side of the basin hangs a towel. By turning the cock fresh water runs into the basin, and by taking out the stopper the soiled water is discharged. The forcing pump below, which drives the water into the upper apartments, can easily be worked by one person.

After dinner we visited the asylum for the insane. The house, not having been erected for the purpose, is rather inconvenient. The gardens are spacious, and contain a fine variety of fruit and vegetables. The number of patients is between forty and fifty, and the expenses of their maintenance, upon an average, is 19s. per week. The shower bath is used to coerce the refractory; and one of the means taken to rouse the melancholy, is to place them in an arm

chair, which, by machinery, is made to revolve round its axis with an easy motion.

Exeter does not contain many persons of distinction in literature. Dr. Lempriere, the author of the *Classical Dictionary*, is the head teacher of its principal grammar school; and L. Carpenter, one of the authors of a late work on education, and the writer of the essays on moral and physical education in Rees' *Cyclopædia*, lately resided in this town.

Exeter is a very ancient city, and its early history is involved in all the mystery of remote tradition. It has been the seat of many severe conflicts, especially between the Danes and Britons. It was surrounded by a wall at a very early period, a considerable proportion of which is still remaining, within the present town; as are also some relics of Rougemont Castle, once the seat of the West Saxon kings. There are here ten establishments for the education of the poor, and a great number of charitable societies. Poverty, however, is by no means banished from the town. "Both in barbarous and more civilized times, (says a short and spirited account of the city, which my friend and guide drew up at my request,) Exeter appears to have furnished a share of eminent persons; and can show a copious list of the swift and the strong, the brave and the learned, the beautiful and the sage. Among these is Sir Walter Raleigh. It is at present chiefly known for its toryism, its bigotry, its intolerance, its gayety, its dissipation, and its infidelity; for its politeness, the beauty of its women, its numerous charities, and its liberality to the distressed at home and abroad."

28th. After an early breakfast, I left Exeter, in the "subscription" coach, for Salisbury.

In leaving the counties of Cornwall and Devon, I cannot but acknowledge, that the state of society, upon the whole, in those counties, appeared to me as favourable to human nature, as in any considerable district of country I have ever visited. There is rather an unusual degree of intelligence among the middle ranks. The towns, it is true, contain a large proportion of the worthless and the vile; but among the middling and upper classes, learning is generally diffused; hospitality is cherished, and the charities and comforts of life seem to be interwoven with the texture of domestic society, and modelled upon a taste which can only be the result of time and experience. It may appear pre-

sumptuous to speak thus from so rapid a glance as that which I have taken ; but there are features which may be seized upon, even in such a transit, as indications of the prevailing morals and manners of a country, or neighbourhood, which cannot, I think, be easily mistaken.

The climate is, in general, very mild, which, in connexion with the moisture of the atmosphere, greatly favours that clearness and transparency of the skin so commonly observed. The agriculture of this part of England, as far as I could judge, by passing rapidly through it, is not superior to that of the middle states of America. The plough, in common use, is extremely heavy, requiring four horses to move it with facility ; at least that number was mostly employed in the instances which I observed.

Devonshire is, perhaps, more famous for its cider than any other county in England. But the very best that I tasted would be considered as inferior to that which we call tolerably good in the United States. It is harsh, and ill-tasted.

Ilchester, a town on our road, is the place which gave birth to Roger Bacon, in 1214, and to Elisabeth Singer, afterward Elisabeth Rowe, author of the Letters from the Dead to the Living. Shortly after, passing through Mere, an ill built and uncomfortable looking place, we came in sight of Fonthill, the celebrated seat of W. Beckford, Esq. This seat is admitted to be one of the most remarkable abodes of wealth and grandeur in the whole kingdom. It occupies an eminence, which overlooks the adjacent country, and, at a distance, appears like a forest, out of which, and near the summit, rises a tower, called Fonthill Abbey, which the uninformed traveller would take to be a noble Gothic church, but which is, in reality, a part of the extraordinary mansion of its possessor. The grounds of Fonthill are enclosed by a stone wall and chevaux de frize of seven miles in circumference. The space within this enclosure is said to exhibit the most astonishing variety of all that is grand, picturesque, and beautiful in nature and art. In the bottom of the wood is a fine pellucid lake, in some parts of great depth, stretching and meandering so as to give an idea of greater magnitude than it possesses. This lake is plentifully supplied with wild fowl. Every animal sports undisturbed ; and conscious of security, the hares will feed at the horse's feet, from the hands of the rider, and frequently associate in great numbers within a few paces of

the windows. In one part of the enclosure is an American plantation, containing the woods and shrubs peculiar to that quarter of the globe. The Abbey is supplied with water, forced through pipes by a wheel twenty-four feet in diameter, which is put in motion by a stream, conducted from the lake, through a wooden trough. At another place is a space, surrounded by a light iron fence, which is called the Chinese garden, particularly appropriated to the culture of the rarest flowers. The kitchen garden contains eight or nine acres, and is screened on the northern side by a wood of lofty pines.

The abbey is described as being one of the richest and most magnificent structures in England. The great tower is 270 feet in height. The doors of the hall are thirty-five feet high and highly ornamented; the hinges weigh more than a ton; and yet they are so exactly poised, as to be put in motion with the slightest effort. The architecture, the statuary, the paintings, the tapestry, and the furniture of this mansion, all conspire to render it one of the most wonderful specimens of skill, expense, and folly, which the island of Great Britain can produce. Of folly, because, notwithstanding the curiosity which the building of it excited in the country around, the proprietor has chosen to keep it entirely concealed from the public; and according to report, he lives a solitary and depraved life; taking no pains to secure the esteem of his neighbours, and being despised by most of them. The grandfather of the present owner, was considered as the richest subject in Europe.

We passed through Hindon, near Fonthill, and Wilton, once celebrated for its manufactory of carpets, and arrived in the evening at Salisbury. The ride, during the greater part of this day, has been highly pleasant; the company which I met in the coach, were very civil, and some of them well informed and agreeable men. It has been the longest day's ride (ninety-six miles) I have ever had on the top of a coach, and from this trial of it, I think it decidedly preferable, in good weather, to an inside seat. The coach stopped at the Antelope Inn, which I found to be a good house. This is the day of the Salisbury races, which are held a few miles from this place; and a great deal of company, male and female, appeared to be preparing for the scene of merriment and dissipation. The town of Salisbury has been laid out with great regularity. Through a small canal or ditch, on one side of almost every street, runs a rapid stream of fine

clear water. The names of streets, as well as of persons, in strange places, are not altogether uninteresting to a traveller. In this town I saw the termination of *Endless street*; and found, that if I were so disposed, I could lay out not a little of my cash in *Penny-farthing street*. A name which appeared to me very appropriate to the man's profession, and written in very conspicuous characters on his sign, was "*CHEATER, Dealer in Foreign Spirits.*"

The cathedral of this town is one of the most admired in the kingdom. Its exterior accords better with my notions of taste and beauty than any of the ancient buildings of this kind I have hitherto seen. Although it was finished in the year 1258, it is in excellent preservation. The spire it is supposed, was newly erected in 1423, and the lapse of five centuries seems to have made but little change in its exterior workmanship. The outside is decorated with much carving, but so much simplicity prevails in the style of it, as to add greatly to its elegance. The length of the cathedral, from east to west, is 478 feet, including the choir, and the whole breadth of the cross aisle, 210 feet. The top of the spire is 410 feet from the ground, being nearly seventy feet higher than St. Paul's in London, and double the height of the Monument. A singularity in the internal arrangement of the cathedral, is expressed in the following lines by Rogers, author of the *Pleasures of Memory*.

As many windows you may here behold,
As days in the revolving year are told.
Compute the hours that one full year compose,
As many marble shafts these walls inclose;
Nor numbers Phœbus in his annual round,
More months than doors within this fabric found.

The space surrounding the cathedral was formerly a grave yard, filled with tomb-stones, and enclosed by a ditch. The tomb-stones have been removed, or levelled, the ditch filled up, and the space converted into a beautiful green lawn, by the direction of one of the bishops.

The interior contains a number of paintings, some of which are on glass. Two of the large windows are finely ornamented in this way, one of which is twenty-three feet in height, and the other twenty-one by seventeen and a half feet wide. The monuments are numerous, both ancient and modern, and many of them are admitted to be good specimens of sculpture. Among the most remarkable is one of Bennet, a person who attempted, from religious enthusiasm,

to fast forty days and nights. In this attempt he persisted until he perished. A sculptured figure of a man, emaciated almost to a skeleton, is placed over his tomb. Harris, the author of "*Hermes*," was born in this town; and his monument, by Bacon, is perhaps the finest in the cathedral. The classical conception and execution of the whole piece, challenges the liveliest admiration. I ascended to the top of the tower, whence a view was obtained of the whole town and neighbourhood. The height of this steeple is so great as to be visible at the distance of eighteen miles, a fact which was verified in our approach to Salisbury.

The plains, so much celebrated in this part of Wiltshire, as the resort of shepherds with their flocks, were not directly in our road; but the vast flocks of sheep which we saw on the downs, over which we did pass, gave me an extended idea of the pastoral life. Salisbury contains between 8 and 9000 inhabitants, and it is noted for the manufactory of cutlery and steel goods.

Notwithstanding that the celebrated piece of antiquity, called Stonehenge, is but seven miles from Salisbury, yet, as it lay directly away from my road, and has been often and accurately delineated and described, particularly in the valuable journal of my friend Professor Silliman, I concluded to leave it unseen, and to proceed immediately to Southampton.

About three miles from Salisbury, we passed Clarendon Park and House, which in 1661 gave the title of earl to the famous Edward Hyde, whose two granddaughters sat upon the English throne. The road was very fine. Men and women were busy at the harvest. We changed horses at Romsey, a pleasant town surrounded by beautiful meadows, in which is an ancient abbey in whose church several of the Saxon kings were buried. This church yet remains one of the finest specimens of Saxon architecture.

We arrived at Southampton before night, twenty-four miles from Salisbury. The best inn in the place being entirely full, I went to the Commercial Inn, and, as in former cases, took my station in the traveller's room; a particular apartment, which, in most inns in England, is appropriated to that class of commercial agents, who are almost constantly on the road. In the course of conversation with these people, I have frequently been asked, how I found business, and whether the times were not rather difficult for collectors. Upon informing my company this evening,

that I was not an English traveller, but an American, they expressed the greatest surprise ; one of the company asserted, that if I had not undeceived him, he should have been willing to declare that he had met me before as a traveller, and that my face was familiar to him. It is thus that I have been able, when I pleased, to pass for an Englishman ; and as to being taken for a traveller, I consider it no discredit, for most of these men dress like gentlemen, and some of them possess much literary as well as commercial information. The travellers' room is furnished at a little more than half the price which those who have separate apartments are obliged to pay ; and their table, moreover, is generally better served, because they understand what good living is, and the landlord knows well, that it is his interest to oblige them.

LETTER X.

Brighton, 8th month (Aug.) 6, 1818.

MY DEAR *****,

SOUTHAMPTON is situated at the head of a bay about a mile wide, and fifteen miles from the sound which separates the Isle of Wight from the main island. The town is supposed to have arisen out of the ruins of a Roman settlement. It was here that Canute, the Danish invader, obtained the British sceptre ; and it was on the shore of this bay that he taught the memorable lesson of humility to his flatterers, by commanding the waves not to approach his feet. The town contains about 10,000 inhabitants ; but the number is greatly increased during the summer months, by visitors from the interior, on account of health and bathing. The town itself is pleasant, and the environs particularly agreeable.

At 10 I embarked in the packet for Cowes, in the Isle of Wight, distant eighteen miles. The wind was favourable, and the morning delightful. The borders of the river are ornamented by diligent cultivation, while the seats of wealthy individuals occur at intervals, and give variety and interest to the passage. But there was one object on the shore, which peculiarly claimed our attention, as we passed along, the ruins of Netley Abbey. The foundation of this abbey is ascribed to Henry III., in 1232. It has long been a heap of ruins, covered with ivy, and embosomed in woods, but

they are so picturesque and interesting, as to have furnished a theme for poetical description, and moral precept. Superstition has lent its wizard powers to embellish the history of these ruins, and to give a sort of sanctity to the spot. One of the purchasers, it is reported, had his skull fractured, in attempting to take down part of the wall, of which melancholy consequence his wife had been forewarned by a dream, of which her incredulous husband was too regardless! We could not obtain a good view of the abbey from the river, but the ruins of Netley Castle, built by Henry VIII., were very conspicuous on the water edge, immediately below the abbey.

We landed at Cowes, after a passage of an hour and thirty-five minutes. This is a small town, built on the side of a hill, and having a pleasant appearance from the water : but on landing, the principal street was narrow, and very uninviting. I proceeded immediately to Newport, the capital of the island, five miles from Cowes. The harvest was less advanced here, than in Devonshire and Cornwall : but the vegetation of the island has been almost destroyed by drought. Newport is a town of 6000 inhabitants, on a small river, navigable for large boats. It is pleasantly situated, and much more regular than common country towns. Very extensive barracks, newly and handsomely built, near the town, have an imposing effect upon the eye. The tricks of mountebanks, and other allurements more licentious, were evidently not wanting even in this insulated place.

31st. Having engaged a gig and a boy to drive it, I left the Sun tavern, where I was well accommodated, to make the southern and eastern tour of the island, along the sea coast. On my right, about a mile from Newport, I passed Carisbrook Castle, situated on a very commanding eminence. This castle is remarkable for its immemorial antiquity, and for its having been the prison of Charles I., and the place where his family was confined, after his execution.

The Isle of Wight, on the side next the sea, exhibits a great deal of the picturesque and romantic in natural scenery. A rocky bluff, in some places 700 or 1000 feet above the tide mark, and consisting of perpendicular strata of green sandstone and chert, rests on a stratum of blue marle. By the action of the land springs on this latter stratum, the marle becomes of the consistence of mud, runs out, and leaves the sandstone without support, which, being deprived of its foundation, tumbles down. In this way are produced

those sudden and violent movements of the hill toward the sea, which are called land slips, and which, by a slow and irregular progress, have produced an immense ruin, in various places, on the southern coast, forming the most striking feature of the Isle of Wight. So extensive has been the decay of this rocky base, there is now a space of half a mile between the perpendicular bluff, and the sea below; a space remarkable for the fantastic irregularities of its surface; variegated as it is, by rocks and woods, cottages and fields, and all the luxury of cultivation. A ride over this singular region, constitutes the principal attraction of visitors to this island.

These land slips are ascribed, by the author of "*Vectiana*," to the expansion of subterraneous water during congelation, thus "forcing the rocks, in a loose soapy soil, from their position, on a declivity, and leaving them to find a settlement nearer the sea." But I think it very questionable, whether the cold is ever sufficiently intense, on this southern shore, to freeze the water to any considerable distance below the surface. The theory, which ascribes the phenomena to the gradual influence of subterraneous streams, percolating through a loose substratum, appears to me much the most philosophical.

We entered upon this singular tract, just below Niton, a village of about 300 inhabitants; consisting of two irregular streets, of thatched cottages, with walls of freestone.

St. Lawrence, a small parish through which we passed, contains only seventy-six inhabitants. The church, which stands by the road, is acknowledged to be the smallest in England, its dimensions being not more than twenty feet in length, and twelve in breadth. A person in the yard, who appeared to be the sexton, told me it would not accommodate more than ninety persons, with any convenience. I could not but contrast this number, with the 10,000 whom I had recently seen assembled in St. Paul's cathedral, in London.

Among the cottages, and summer residences of gentlemen, which adorn this romantic road, is one belonging to Earl Dysart. It is a plain, but neat and comfortable little mansion. The rooms are hung with pictures, and the grounds around the cottage can hardly be better described, than by imagining a small farm, to consist, like a house, of several stories, one over another, each receding from the perpendicular, and the whole suspended between the level

surface of the ocean, and the summit of a high and abrupt hill in the rear. The prospect, from various points of these romantic grounds, is singularly fine. Arbours and seats are erected in situations the most favourable for viewing the variegated prospect of sea and land; of gardens, groves, and water falls; the wildness of nature, and the exquisite culture of art. The furniture and rooms of the cottage, were kept in the nicest order, though I was informed by the inmates, that the earl had not occupied it for a long time past.

I dined at Shanklin, a very pleasant village, near which is a deep cavity, produced by the constant rushing of a stream of water, from the upland to the sea. I was amply repaid for descending to the bottom of this cavity, and viewing, from the sea shore, the high and abrupt bluff, which borders it in this place.

About two miles beyond "*Steep Hill*," the name of the seat last mentioned, is the parish of St. Boniface, the church of which, is of Saxon antiquity. The entrance to it is through a perfect Saxon arch.

The town of Brading has about 500 inhabitants, and its church is supposed to be the oldest in the island. The following epitaph, on a stone in the yard, must be admired by every one, for the beauty of its composition.

Forgive, blest shade, the tributary tear,
That mourns thy exit from a world like this:
Forgive the wish that would have kept thee here,
And stay'd thy progress to the seats of bliss.
No more confin'd to grov'ling scenes of night,
No more a tenant pent in mortal clay;
Now should we rather hail thy glorious flight,
And trace thy journey to the realms of day.

My excursion on the island terminated at Ryde, a pleasant and newly built town, opposite to Portsmouth, from which it is distant about five miles. A favourable wind took us across in about thirty-five minutes, and a letter to the collector of the customs, procured me a very polite reception from him and his family, with whom I took tea, and spent the evening. He is a man of acknowledged ingenuity in mechanics, his talents having placed him at the head of an important canal concern, designed to benefit the town of Portsmouth. His knowledge of the principles of sound, was exhibited rather curiously in his common sitting room. A tube, opening by an ear-piece, into the room, by the side of the fire-place, passed through the partition into the kitchen, and terminated at the ceiling. By speaking in a

low voice, at the mouth of this tube, orders were easily given to the servants ; and by applying an ear to the tube, the common conversation of the kitchen could be understood.

8th month, 1st. The town of Portsmouth is very strongly fortified. The battery, or side next the sea, presents an agreeable promenade ; Gosport, on the opposite side of the harbour, the Isle of Wight, and the ocean, being comprehended in the perspective. The population is about 50,000, and that of Gosport, nearly 10,000.

The son of the collector called this morning to conduct me to the Dock Yard, his father having engaged the attention of one of the officers of the yard, in favour of my admission. I was also provided with a letter from London, to another of the officers. Thus favourably introduced, I spent several hours in viewing the very extensive and ingenious operations, here carried on. The Dock Yard contains 110 acres, surrounded by a high wall, and strongly defended on the land side. Within these limits, almost every operation, connected with ship-building, is conducted with a surprising degree of energy and perfection. About 2500 men are constantly employed, and in time of war 3000. Six dry docks are included, in each of which, vessels of the largest size, can be built under cover ; and, when finished, the water is let in, they float, and are towed into the stream. The main canal, or opening into the yard, instead of being closed by gates, is shut and opened in an extremely ingenious manner, by means of a boat, constructed for the purpose. This boat is placed transversely, in the opening of the canal, and having a strait keel, and perpendicular ends, it moves up and down in grooves, in the walls of the canal, and the keel fits a groove, adjusted to the bottom. When the boat is empty, it swims, and can then be loosened and moved out of the way. When brought back, it is filled with water, and then it sinks to the bottom, and stops the passage.

The bottom of the dry dock is about fourteen feet below low water mark ; and as it is almost impossible to prevent leakage from the gates, a steam engine is employed to keep them dry. Two engines are used in the yard, one of the power of fifty-six, and the other of thirty horses. Either of them is sufficient, not only to keep the docks empty, but to drive the block-making machinery, the rollers and presses for making sheet copper and sheet iron, bolts, blowing the bellows for the furnace, &c.

But by far the most ingenious part of the machinery in the yard, is that by which the blocks are manufactured. This is the invention of Brunel, a Frenchman, whose surprising talent, in practical mechanics, has been patronised by the British government, and greatly to its advantage. Such is the nature of the block machinery, that the saws, the augers, the chisels, the planes, the gouges, the polishing tools, in short all the instruments by which a large beam, or tree, of ash or other wood, a hard stick of *lignumvitæ*, and a rough bolt of iron, are converted into a block and pulley, move by steam, and with such velocity and precision, that it is believed, this single manufactory might supply the whole world with blocks, and at a cheaper rate than they can be made any where else.

The saws are mostly circular. That which is used for dividing a stock or tree of *lignumvitæ*, into flat sections for the wheels or pulleys of the block, is surprisingly ingenious, in its adjustment and movement. The saw is placed horizontally in an upright iron frame; which frame itself, has a circular movement round a vertical axis. To this axis or centre, a stick of *lignumvitæ*, cut from the natural stock, of two and a half feet in length, (a little more or less,) is firmly fixed, and is raised or lowered by a ratchet, so as to place that spot precisely against the saw, which will enable it to take off a piece of the requisite thickness. The saw, revolving with extreme rapidity, is then pressed against the wood by a hand lever, and at the same time, by the slow revolution of its frame, it moves round the stick and cuts into it in every part of its circumference. By this means the saw will cut through a tree of nearly twice its own radius, and separate from it a section perfectly flat, and of the same thickness in all its parts. Trees or stocks of different thickness, can be adjusted to the same saw, by the varying grasp of the clamp or chuck which holds it.

The saw which trims the pulley to a true circle, is shaped like a surgeon's trephine, or the crown wheel of a watch. They all move with extreme velocity. I was witness to the motion of a plank, about eighteen feet in length, by which it passed under a saw and had a slit cut half way through it, from end to end, in ten seconds. A necessary part of the operation, is to turn the blocks in a sort of lathe, so as to give them the requisite oval shape and smooth surface. For this purpose, ten oblong blocks, having the corners roughly sawed off, are rapidly adjusted to the hollow circumference

of a large wheel, which being put into gear, the blocks move round very swiftly, and are brought at pleasure against a tool, which, pressed by the hand, moves at discretion round the corner and sides of the blocks, and turns them down, with the utmost precision, in the form required.

Copper and iron are taken from the pig in this factory, melted, recast, and rolled into sheets. Bolts are also fashioned by the roller, both of copper and iron. I observed that when the sheets of copper come from the rolling press, they are covered with a hard coat of oxide. To separate this, they are heated again to redness, and then plunged into water. This increases so rapidly the coat of oxide, as to loosen it from the plate. It is then simply rinsed off, leaving a bright metallic surface, and the oxide of copper thus collected, is afterward reduced in the furnace. The apartment in which anchors are forged, is vastly extensive, and so highly charged with smoke, fire, steam, and noise, as forcibly to remind one of the fabled caves of the Cyclops. Many of the anchors which are wrought here, weigh from 70 to 90 cwt. each.

I left this yard, (certainly the most gigantic manufactory which sin and death have ever erected,) with more exalted opinions of the intellectual power of man, and more humiliating sentiments of the depravity of his nature. If the same reach of intellect, the same persevering application of talent, the same national zeal, and a hundredth part of the expenditure, were employed in devices for preventing war, saving life, and promoting the comfort and happiness of nations; how very few years would elapse before the face of the whole habitable globe would be changed, and the general aspect of human affairs be radically and substantially improved. Is it folly to think that the time may arrive, when *national* strength will be directed to this grand object, to the exclusion of warlike preparation? And is it presumption to believe, that, through the combined efforts of good men, under the blessing of Providence, this benign change in the feelings and enjoyments of mankind, will in time be effected?

Convinced, from my own observations, and from the information I received, that the state of public morals in the town of Portsmouth and its neighbourhood, is none the better for its being the key of England, and the great depot of its naval concerns; I left it in the coach for Chichester, where I arrived in the evening. The country through

which we passed is fertile, the grain large, in good condition, and rapidly yielding to the sickle. Gleaners are seen in almost every field from which the grain has been gathered. In one field, probably of ten or twelve acres, I counted thirty-five gleaners. This indicates poverty far greater than any that afflicts our poor. The country is generally flat, between Portsmouth and Chichester; the upper stratum is of chalk. I availed myself of a remnant of daylight to walk through the town; and finding the church open, I entered it, and was guided by the sexton through its aisles and among its tombs. The most interesting of the monuments, is that erected to the memory of Collins the poet, executed by Flaxman. The workmanship is exquisite, representing the poet recovering from a fit of phrensy, and seeking refuge from his misfortunes in the consolations of the Gospel. The epitaph, it is said, is the joint production of Hayley and Sargent. Collins was a native of this town. This church contains a great number of paintings.

Chichester is an ancient city, regularly planned and pleasantly situated. A considerable portion of the wall which formerly surrounded it still remains. In the centre of the principal street is a remarkable fine Gothic cross, erected in 1478.

The charities of this town are highly creditable to the judgment and humanity of its citizens. The daughter of a female friend, at whose house I met with a reception which forbade my seeking other quarters, in conversing on the state of their public schools, evinced the lively interest which she takes in the concerns of the poor, especially in relation to their children. She showed me a considerable library of books, adapted to the understandings of young people, which she kept to loan out to such as wished to read. She also receives from them their little earnings, (not disdaining even a farthing,) which, when they amount to a certain sum, she places in the Savings Bank, where they draw an interest. It is almost impossible to estimate the benefit which may thus be done, even by an individual, in giving to the children of the lower classes correct notions of economy and industry, and some taste for books of an instructive tendency.

In passing from Chichester to Brighton, we dined at Arundel, a town on the river Arun, where is a famous castle, which was once considered as one of the strongest in England. Worthing is a considerable place, very recently built,

immediately on the sea coast. The houses are large, and handsome, having been erected chiefly on speculation, with a view to the profits arising from visitors who frequent the coast, for purposes of health and pleasure.

Dr. Fearn, my fellow passenger, and S. R. Wood, of Philadelphia, had agreed to join me at Brighton, whence we were to proceed to Paris. In waiting a few days for their arrival from London, I experienced the greatest hospitality from J. Glaizyer, a friend of that place. A very short time is sufficient to see all that is particularly worth notice in Brighton, or Brighthelmston, as it is written on the maps. The number of inhabitants is increased nearly one half, at particular seasons, by the influx of visitors from all parts of the kingdom, but more especially from London. Many of these are doubtless invalids, but the greater number come merely to pass away their time, or because it is a place of gayety and fashion. Visitors resort here at all seasons of the year, either for sea bathing or the enjoyment of a salubrious air. The greatest number, however, are here during the summer and autumn. Besides sea bathing, ample provision is made for cold, tepid, and warm baths, and also for steam and medicated vapour baths. A custom has been introduced, which I never before heard of. It is called *shampooing*, and is said to be derived from India. To render it more imposing, the operation is superintended by a person called Mahomed. Whether the practice was introduced by some real believer in the Koran, who came to England for this purpose, or by a crafty adventurer, who assumed the name, I know not. The process of shampooing, to be agreeable and effectual, must be performed by people regularly trained to it. They are called shampooemen. After the body of the patient has been thoroughly supplied by the sea water vapour-bath, the shampooers squeeze the flesh and muscles with their hands from the extremities to the centre, and conclude by rubbing the skin briskly, which removes obstructions from the pores, and renders the skin as soft and smooth as satin. So highly is this new practice extolled, that one of the notices which I have seen of it, states, "that it may fairly be alleged, that the universal remedy, as a panacea, has at length been discovered!"

A great proportion of the houses are built, and handsomely furnished for the purpose of being let out by the week or month. The shore is not very favourable to bathing, the position, in my opinion, being very inferior

either to Long Branch or Rockaway, in the vicinity of New-York. The bathers are taken into the sea in a small dressing-house, drawn, or rather pushed by a horse. From this house they descend by wooden steps into the water.

The channel is too narrow to admit of a fine refreshing surf, and the water deepens so gradually as to afford no good accommodations at low tide. The shore, a bold, chalky bluff, is also so high and steep, that the descent from the bank, on which the town stands, to the water's edge, is a formidable task for invalids.

The houses are very commonly constructed with arched fronts and bow windows, and the material is either brick or flint. The latter substance is procured from the chalk beds in great quantities, in rounded nodules, of the size of a large potato. When broken in two, the fracture is smooth and glossy, and being placed in front of the houses, sometimes alone, but more frequently alternated with rows of bricks, they give to the fronts an appearance very peculiar, and agreeable. A particular sort of tile is also used here, which, when applied to a rough wall, furnishes a better front than common bricks, and at the same time excludes more effectually the moisture of the atmosphere. These tiles are used also as a facing to wooden houses. They are so shaped as to be easily attached to each other, and to the wall, by nails and a little mortar, and they give to the wall exactly the appearance of neat bricks. I cannot but think that they are worthy of adoption in other places.

It has become much the fashion in Brighton, as well as in other parts of England, to use asses (or donkeys, as they are called) as a substitute for horses, both under the saddle and for draught. Two or three of these diminutive creatures are harnessed to a chaise or gig with very low wheels, and driven by a boy, who generally rides as postillion. They answer a valuable purpose. It costs but little to keep them, and they endure labour, and even rough usage, with a strength and vigour, disproportionate to their size. They are much employed by females and young riders of both sexes, being more easily mounted, and less dangerous than horses. They might, I should think, be advantageously introduced into the United States.

Very few trees are to be seen in Brighton, or in its immediate neighbourhood, in consequence of the chalky stratum on which it is built. This is a deficiency which art cannot well supply. The Prince Regent has a house here,

in the centre of the town, called the Pavilion. Its architecture is extremely whimsical, if not ridiculous, having more the appearance of a Turkish mosque, than of a Christian habitation. It has been undergoing almost constant alterations during the last twenty years, and is not yet completed to the satisfaction of its royal owner. But

“Great princes have great playthings,”

and the Pavilion has probably answered the purpose of a useful hobby to his Royal Highness.

A packet leaves Brighton almost every day for Dieppe, in France. As there is no quay or dock, approachable even by sloops, the embarkation is very inconvenient, and in rough weather it must be extremely uncomfortable, if not dangerous.

LETTER XI.

Paris, 9th month (Septem.) 6th, 1818.

MY DEAR ***** AND ****,

BEING joined by my American friends, and having obtained our clearances for France, and furnished ourselves with sufficient viaticum, even for a protracted passage, we took leave of those whose kind attentions to us claimed our hearty acknowledgments; and at 8 P. M. on the 6th ultimo, we were transported on men's shoulders to an open boat in the sea, and conveyed to the packet, a sloop of about eighty tons; in which we found about forty others, bound, like ourselves, to France. In this company were Alderman Wood, M. P. late lord mayor of London, his wife, and two daughters. At 9 we set sail with a fine breeze.

8th month, 7th. A mat on the cabin floor served several of us as a bed, on which I slept well, although the violent tossing of our little bark entirely destroyed the comfort and rest of many of our fellow-passengers. At 6 A. M. the chalky elevations of the French coast, and the steeples of Dieppe, were in view. The shore here, as well as at Brighton, can be approached at certain times of the tide, only in small boats. At eight we were boarded by a large French barge, and taken out of the packet with our baggage, the tide not serving for the sloop to advance up a small creek to the wharf. On our approaching the shore, we found the surf too high for even the barge to land; on which account it was necessary to procure a smaller boat to convey us to the

shore. A number of people were collected to see us debark, among whom we discovered several gens-d'armes, or armed soldiers. The loud and continued jabber of the French sailors, and the bustle of the people on shore, soon convinced us that we were in a different country and among a different nation, from those we had left.

After landing, our passports were taken possession of by the soldiers, and we ourselves escorted, *à la militaire*, to the custom house. We were there separately examined, first by feeling our pockets, and in some cases, obliging us to exhibit their contents; then by unbuttoning our waistcoats, to ascertain whether we had not increased our bulk by some precious article or other, contraband of trade. After tickling our skin a little, this farcical business was finished, by allowing us to button up and go where we pleased. But I ought not to omit to state, that one of the first objects which presented itself to our notice on landing, was a crucifix, or image of our Saviour as large as life, nailed to the cross. This is erected near the dock, for the due notice of seamen and strangers.

We put up at the "Regent's Hotel," kept by an Englishman; the waiter also speaking English perfectly. Here we took our breakfast, very much in the English style. We were in hopes of being able to pursue our journey immediately, but were told that neither our passports, nor our baggage, (which was all to be examined in our presence,) would be ready till afternoon, and then the diligence for Rouen would be gone. Thus circumstanced, we had leisure to walk through the town.

Dieppe is situated in a valley, between high hills, precipitous next the sea, and composed of white chalk, inclosing flints, exactly similar to the formation of the opposite shore in England. The town contains about 20,000 inhabitants; but we could not avoid remarking the great excess of women, in point of numbers. The streets swarm with females, a large proportion of whom are miserable objects, covered with rags and dirt, and many of them sturdy beggars. England far exceeds America, in the number of beggars one meets with; but in Dieppe, England is quite out done in the race of mendicity. In short, this *debut* of France gives one a very unfavourable idea of the *comforts* of the French. It is true, the word *comfort* has no equivalent term in the French language; and an American or Englishman would conclude, from Dieppe alone, that the enjoyment of it was

equally foreign to their practice. The houses are very high, and have a clumsy and inelegant appearance. The town is finely supplied with water, which is brought in pipes from the hills, and spouts in constant streams in various places in the streets. A very large dock for shipping, was begun by Bonaparte, which, having been suspended during the commotions, is now again in a state of advancement. On going into a large church, apparently very old, we found a number of people assembled in it at mass. The churches are kept open, for this purpose, nearly the whole day. Two large candles were burning, and a marble basin of consecrated water is kept near the door. This religion, I have no doubt, is wonderfully calculated to gain upon the credulity and confidence of the lower classes.

The dress of the women in Normandy, it is said, has not varied during the last century. Its most remarkable characteristic is the cap. When the head is newly dressed, the cap is very white, plaited with great care, and extends at least a foot in height from the forepart, and *about two feet behind the head*.

Having occasion to go into the shop of a barber to be shaved, this service was performed upon all of us by his daughter, a neat little girl of fifteen, and we could not but acknowledge, that she handled the razor with much dexterity.

On one side of the town is a large and strong castle, upon an eminence, which overlooks nearly all the other buildings. Our American passports were taken from us and sent to Paris and another granted us by the mayor of Dieppe.

8th. We hired a carriage with four horses, to convey us to Rouen, distant thirty-nine miles, for which we were to pay sixty francs ; and leaving Dieppe at six, we had an extremely pleasant ride, through a varied and fertile country, in which the wheat was as large and fine as I have ever seen it at home, throughout a district of equal extent. We were here, as well as in England, in the midst of wheat harvest. The chief part of the labourers in the field were women. They were reaping, binding, and loading the wheat. We met them driving carts and loaded asses, going to market with burdens, and indeed, it would seem as if Ceres were bestowing her favours, almost exclusively, upon the *females* of the country. Their complexions indicate as much of the exposure and hardihood of out-door labour, as those of the men. The fields, in this part of France, are entirely without fences, even on the public road. Cattle and sheep, at pasture, are strictly guarded ; cows, when taken to graze,

have a rope tied round the horns, and a girl or boy holds one end to guide them.

We stopped at Toste, a small village, to breakfast, where we were joined by Alderman Wood and family, who were travelling in their own carriage to Paris. The inn was very large, but destitute of that appearance which we call tidy and comfortable. The road between Toste and Rouen, extends along the side of a hill, beneath which is a beautiful valley, through which flows the river Cailly, which empties into the Seine. This valley is very populous, containing a great number of manufactories, of different kinds; particularly of cotton and paper.

We arrived at the borders of the Seine, a few miles below Rouen. The road is here lined with a double row of trees, ropes are stretched across it, from tree to tree, and lamps are suspended in the centre, throwing their light over the whole area of the road, which is at least double the ordinary width of the roads in England.

We entered Rouen by the gate of Havre, and drove through narrow streets, crowded with people and large wagons, to the hotel Vattel. We were here introduced, for the first time, into an inn truly French. One of the servants spoke a little English, and was eager to show us that he understood the language. The floors, even of the bed-rooms, were of brick, or tile, and without carpets. The beds are placed in a recess in the chamber, and furnished with fine curtains. Large looking-glasses are found in every room; in short, the mixture of splendour, and of bad taste; of elegance, and the absence of neatness, struck us very forcibly.

With our fellow-passengers from London, who are also quartered here, we walked out to view the town. We went into the cathedral, which is admitted, I believe, to be one of the noblest piles of this nature in France. The Gothic architecture of this building, the statuary, and the paintings, render it very imposing. Two old priests, in a curious costume; two or three boys, and half a dozen monkish looking men, were chanting, and performing a variety of marches and evolutions to, and from, and round the altar, and from one part of the area to another, while the incense, which was burned upon some coals in a coarse iron pan, filled the interior of the building with a strong and rather odoriferous smell. Without the pale of the altar, were a dozen or twenty poor people, most of whom were kneeling, and each looking over a book. There were others, in

remote parts of the church, apparently engaged in some religious act by themselves. We thence proceeded to a convent, in which forty or fifty girls are educated, in strict conformity to the rites and ceremonies of the Catholic church. We were conducted through the rooms by the abbess or matron, whose countenance and manners indicated great complacency and kindness, but evidently mixed with a strong attachment to the principles in which she was educating her flock. The house was a model of cleanliness. Each of the girls has a room and bed, barely large enough to accommodate her comfortably. These rooms are arranged on each side of a gallery, in the middle of which is a wide passage, extending from one end of it to the other. The greatest attention, I apprehend, is paid to the moral habits of these children. In passing through the chapel of the convent, a sweet little girl, very neatly dressed, courteously presented a plate, and solicited a contribution from us, for the sick and distressed. In the chapel was a crucifix, before which I observed the child to bow, every time she passed it.

We dined at the *table d'hôte* of our inn, in the true French style. Several of the dishes were new to us; the changes were numerous, and the price moderate. Upon the whole, we were by no means displeased with our first essay at the silver fork and spoon, in the land of soups and fricasees. The company at the table was large, and composed of French, English, and Americans. We were regaled, during the repast, with music, by a female performer, on a hand organ, who placed herself before the door for this purpose, expecting, in return, a few voluntary sous from each of the company.

In the afternoon, we all went to the top of mount St. Catharine, a celebrated eminence, near the city. It was a toilsome ascent, especially to our lady mayoress; but, though we had often to stop and renew our strength by a little fresh breathing, when the summit was once gained, we were amply repaid for our exertion. The capital of Normandy, with its surrounding wall, its tall spires, its compact streets, and its fine boulevards, lay at our feet. The Seine, embracing a number of green islands, displayed its meanderings to a great distance. Several villages were in sight; and a wide extent of country, yellow with harvest, filled up the contour of this delightful prospect. The streets were crowded to excess on our return, but soldiers, or *gens d'armes*, were every where mingled with the population.

ready to take notice of any impropriety, and to bring offenders speedily to justice. To judge from the appearance of the populace, we should have supposed that a very large proportion of the inhabitants, must be at a loss for the means of subsistence. Considerable trade appears to be enjoyed here. The number of square-rigged vessels and the bustle along the wharves bespeak much commercial activity.

Rouen, including its suburbs, is said to be seven miles in circumference, and to contain 73,000 inhabitants. It was the birth-place of Fontenelle, of the two Corneilles, and of Joan of Arc ; the latter was inhumanly burnt here, by order of the English general, in 1430. One of the villages, or suburbs, on the opposite side of the river, is connected with Rouen by a bridge of boats, having a draw in the centre, which, when raised, admits the barge underneath to be slipped out, and thus opens a free passage to the vessels employed on the Seine.

9th. Having engaged seats in the diligence, we left Rouen, early this morning, with the hope of reaching Paris before night. To gain a correct idea of a French diligence, you may imagine four strong wheels, placed at such a distance, as to admit of the body of a coach in the middle, holding six persons, three on each seat, facing each other ; a large chaise, with a leathern cover and apron in front, placed before the coach ; and the body of a wagon, large enough to hold six persons, on two seats, riding sideways, and facing each other, adjoining the coach, behind. If these three vehicles are supposed to be united into one body without, yet entirely separate as it regards the interior, a tolerable notion will be gained of the public stages of France. The front vehicle is called the cabriolet, and the hinder one the gallery. The former, to a stranger, is the best part of the diligence, for it admits of the most open view of the country. Through the complaisance of a French girl, who yielded her place to me very politely, I was admitted to a seat in the cabriolet, while two of my companions were in the gallery, and the other (Dr. F.) in the coach, with four or five French women. On one side of me, in the cabriolet, was a Frenchman, and on the other a Polish Jew, with a long beard. The road was excessively dusty. We passed through a great number of villages, and some towns of considerable extent. The country is finely variegated on this route, with hills and extensive plains, cultivated with dili-

gence, but apparently with less skill than in any of our middle states. The chalk formation appeared to reach through the whole extent of this day's ride, sometimes appearing in abrupt and broken cliffs.

About midway of the distance, between Rouen and Paris, the crops of wheat began to yield to the cultivation of the vine, and, in the latter part of the day, vineyards, loaded with grapes, appeared in great abundance. The vine is raised in rows, about three feet asunder, each way. It grows to the height of four or five feet, bearing grapes from within a few inches of the surface, and is supported by a stick driven into the ground, to which it is tied. As this was the first day of the week, we had an opportunity of witnessing the manner in which it is kept by the French; and if it be fair to draw conclusions, from as close an observation as it is possible to make, by passing through a great number of towns and villages, in the course of 100 miles, I should say, that it is considered as a day of pleasure. Business is by no means suspended, for every where the shops were open, in considerable numbers; carts and horses were in motion as usual; labourers were at work in the fields and on the roads; but the majority of the people appeared to be occupied, principally, in concerns of pleasure; collected in groups, at the doors, under the trees, and about the inns. We crossed the Seine several times in the course of the day. The principal towns, through which we rode; were Louviers, Gaillon, Vernon, Bonnières, Mantes, (where we dined,) Meulan, Triel, St. Germain-en-Laye, and Nanterre; some of them very considerable places. Hence you will justly infer, that the country, on this route, is very populous. The horses are managed entirely by a postillion, who rides on the near wheel horse. But another important personage is the "*Conducteur*," who has his station either in the gallery, or on the top of the coach. He is captain of the whole concern; the baggage is under his care; the postillion is at his command; he regulates the period of stopping; helps the passengers out, attends to their meals, aids in carving, &c. The whole establishment is under the control of the government. The conductor and the postillion are officers amenable to the police. There are, of course, much more regularity and decorum in the conduct and management of these conveyances than with us, where the stages are the property of individuals, or of companies, without any particular responsibility. The

Horses in France, at least between Dieppe and Paris, are in general better than those in England. They do not travel perhaps quite so fast, but they are in better condition.

At Marly, ten miles from Paris, we saw the immense works that were erected to raise water for the supply of Versailles. Great quantities are, it is true, elevated to the uncommon height of 533 feet; but the clumsiness of the machinery is past description. It has the appearance of a forest of naked timber. Rennie, the English engineer, offered to erect steam works on the Seine, which would be more effective in their operation than these works are, for no other reward than the timber he should find on the spot.

The preference given by the French to Americans, is manifested on almost every occasion which presents itself for showing it. One of the gens-d'armes, at Dieppe, on finding we were Americans, said to me, "Ah! bon, bon; les Anglais ne sont pas bons." They show their dislike to England sometimes rather rudely. "Combien, garçon," said I to the boy, who assisted in changing the horses, at St. Germain, "Combien d'ici à Paris?"* Knowing I was not a Frenchman, and supposing me to be English, he replied, "D'ici à Paris? C'est cent lieux, Monsieur *Roastbif*."† The Frenchman by my side, upon learning that I was an American, very freely indulged himself, in manifesting his attachment to Bonaparte, by extolling every thing he had done; and venting his dislike to the English. As we approached Paris, his warmth increased; every thing beautiful or great had been rendered so by the emperor. In passing Malmaison, he dwelt upon the improvements Napoleon had made there; and when we entered the grand Avenue, to the great city, lighted with lamps suspended from the trees, and passed the triumphal arch, into the Elysian fields, the poor fellow could hardly contain himself, so great was his ecstasy, in his eager desire to point out every thing to me that was curious and interesting, and to make me understand how much was due to the emperor. I remarked to him, at length, that Napoleon had produced an earthquake in Europe, and in the violence of the concussion, he himself had been jostled to St. Helena. His countenance fell, and with an expression of deep regret, he replied, "Ah! Monsieur, c'est vrai!"‡

* How far from here to Paris?

† From here to Paris? It is a hundred leagues, Mr. Roastbeef.

‡ Ah! sir, that is true.

The entrance of Paris, by the Avenue de Neuilly, and the Champs Elysees, especially at an hour when the business of the day is over, can hardly fail to make a dazzling impression on the mind of a stranger, let him come from what country he may. We entered the city just as daylight was beginning to yield to the splendour of the lamps. The Avenue, including the Elysian fields, must be two miles long. It was thronged with carriages, and horsemen, and horsewomen, and thousands of pedestrians, all bent on pleasure. In many places they were formed into groups, dancing to instruments of music. The gardens were illuminated, and sports of all kinds in operation. Such was the scene presented to us, on our arrival in this great metropolis, on the evening of the Christian sabbath. If the question had been asked us at this moment, "What kind of people are the Parisians?" we should have answered, 'They are a fiddling and dancing people, caring for little but the present hour.

We alighted, where all travellers who come to Paris by the public conveyances must alight, in the Grand Cour des Diligences. Every *conducteur* is obliged to report himself and his charge at the office in the great yard, and due notice of it is entered on the books. We proceeded to Meurice's hotel, Rue St Honoré, a house in which 150 beds are made up, exclusive of those for servants; yet it was with some difficulty that we obtained accommodations. Alderman Wood and family, who arrived a little after us, were obliged to seek for quarters at another inn.

10th. In consequence of a lameness in my knee, from a slight injury, I did not go out to-day. My friend, Dr. P. of Philadelphia, who has been two years in Paris, called to see me. He administered leeches to the swelled part of the knee, which afforded effectual relief.

11th. My first *sortie* in this splendid capital, was in a visit this morning, with my companions, to the palace of the Louvre, so distinguished as the great temple of the fine arts in France. In passing through the garden of the Tuilleries, my eyes were completely dazzled with the lustre of a brilliant sun, reflected from the statues, the fountains, the gravelled walks, and various other elegancies on the one side; and the marble front of the palace on the other. Nothing can be more imposing than such a *debut* in Paris. On entering the garden from the side of St. Honoré, passing through it to Pont Royal, and ascending the river in

front of the Louvre, the most sumptuous and elegant parts of the city, burst at once upon the view. And if such an *entrée* is calculated to strike the mind with astonishment, an admission to the museum of the Louvre, will not diminish the impression. The statues, busts, and antiques, are in various apartments on the lower floor ; and the paintings, above. To describe them would require a volume. The first effect is astonishment, at the *freedom* of the exhibition. There is nothing in statuary or painting which shocks the female delicacy of the French. In this respect, the English go much farther than we do ; but in France this freedom is pushed to greater lengths. The public gardens abound with statues, which, in America, are only placed behind skreens in our exhibition rooms. The most highly wrought models of the *Venus de Medicis*, serve as decorations in some of the coffee rooms, and other places frequented by both sexes, and yet the dress and manners of the French women, are, at least to appearance, quite as decorous as those of England or America.

From this simple view of the case, it might be at first concluded, that the style of manners in France, in relation to those denuded exhibitions, cannot be unfriendly to public morals ;—nor have there been wanting philosophers, of both sexes, who have contended, that our common notions of decency are entirely artificial ; and that the concealment of truth and nature, is more injurious to purity of sentiment and feeling, than the simple and undisguised habits of the Pelew or Fejee islands. But it might easily be proved, as I conceive, by a reference to the history of those islanders themselves, that in proportion to the advancement of human society in civilization, and intellectual refinement, such primitive habits are found to be entirely incompatible with the preservation of public and private virtue. Nor is the actual state of morals in France, any evidence to the contrary : but, as I believe, greatly the reverse. Their own records publish to the world, that one third of the births in the city of Paris, (amounting to upward of 8000 annually,) are “*hors de marriage* ;” and as to conjugal fidelity, where could the person be found who would have the courage to rank this among their *prominent* national virtues ?

Fifteen apartments in the Louvre, including the vestibule and corridor, are appropriated to the antiquities of Egypt, Greece, and Rome. The whole number of figures, comprehended in the printed catalogue, is 361. It is impossi-

ble to enter these halls, at least for the first time, without experiencing the most vivid impression. The sudden display of so much elegance and splendour, rouses the feelings to a pitch unknown before; and the admiration which is thus so forcibly excited, scarcely loses any thing of its intensity, by a minute examination of the various objects contained in this long suit of apartments. If novelty and wonder are the first emotions, the mingled feelings of delight and astonishment, will be maintained by such an evidence of sublime conception and exquisite skill in execution, as the greater number of the pieces so clearly proves.

The ascent to the picture galleries, is by a wide and sumptuous staircase. The number of apartments is here also considerable. In the one which adjoins the antichamber, the pictures are mostly very large; but it is not till one enters the grand gallery, that the imagination is wrought upon to the highest pitch, and that the enthusiasm, which animates every Frenchman in speaking of the museum of the Louvre, can be duly understood and appreciated. You may, perhaps, form some idea of the effect upon the mind of a person who has never seen a very large collection of pictures, on entering, at one end, an apartment, about thirty feet wide, and more than a quarter of a mile in length, with a ceiling beautifully arched and divided into ornamental squares, with its walls entirely filled from one extremity to the other with the finest pictures; excepting, that, at intervals, elegant marble pillars are erected at short distances from the walls, between which are superb mirrors, that reflect the splendours of the gallery in every direction.

Although the Louvre has been shorn of much of its imperial glory, by the just retribution of plundered nations, there appears no deficiency whatever, to the eye of a spectator to whom the exhibition is new. The catalogue must now, indeed, be very different from what it was when the choicest pictures and statues of Rome, Florence, Venice, and Milan; of Brussels, Antwerp and other cities, were included in the collection. But France possessed, within her own domain, enough of the productions of the fine arts to fill up the blanks by judicious selection:—and though some, indeed many, of the paintings, did not strike me as possessing much interest, the collection is altogether too multifarious and splendid, to allow me to venture upon the difficult and delicate task of description.

The Louvre is an extensive palace, now connected with

the Tuilleries, and forming on the side of the river a magnificent line of buildings. Opposite to its central opening on the Seine, a new and beautiful iron bridge has been thrown across the river, expressly for the accommodation of foot passengers. It is the only bridge in that part of the city, at which a toll is demanded. As this bridge connects the Louvre with the buildings occupied by the Royal Academy of Sciences, it is called the "*Pont des Arts*." It is a very long time since any part of the Louvre has been the abode of royalty. Napoleon had commenced, and put into a train of execution, such extensive additions and alterations, as would doubtless have rendered it the most magnificent palace in the world; and that the fame of its completion might be connected for ever with his own name, the letter N., in large capitals, has been inserted, in numerous places, in the solid masonry of the front; and in so substantial a manner, as to defy the attempts, hitherto made, completely to obliterate it.

We this evening witnessed the ascent of a balloon, from the gardens of Tivoli. The manner of filling it with hydrogen gas, was very obvious. Into a great number of casks, containing diluted sulphuric acid and iron, were inserted pipes, which terminated in the neck of the balloon. Through these the gas escaped, and gradually inflated it. The silk being completely expanded, a light car, shaped like the body of a small gig, was suspended from a net which covered the balloon; and when all was ready for the ascent, the intrepid Madame Blanchard mounted the car, standing upright in it, holding in one hand a white flag, and in the other a lighted match. The cords which held the balloon to the ground were slackened, and she remained suspended, for a short time, just above the heads of the spectators, waving her flag; then, at a signal given, the cords were detached, and, still standing upright in her car, she rose with a movement which combined more of sublimity and gracefulness, than any thing I ever beheld within the compass of human art. The wind blew very briskly. When she had risen fully above the tops of the trees, she applied her match to the fireworks, and in a moment she was enveloped in fire, smoke, and thunder; but at such a distance below her, as to do no injury to her frail vehicle. These fireworks are inflammable mixtures, suspended from the balloon, and communicating by tubes with each other, and by a train of powder to the car. The effect was truly wonderful. To see a hu-

man being, and that too a delicate female, suspended in the air to a ball, and scattering around her fire and thunder, and then rising, with majestic grace, into the upper regions of the atmosphere, and sailing, with the velocity of an eagle, cannot fail to produce the liveliest astonishment. This ascent, we were informed, was the seventy-fourth flight of this skilful aeronaut. There would seem, therefore, to be scarcely more danger in making a journey through the atmosphere, by means of a silken bag, filled with inflammable air, than in a voyage at sea!

Two kinds of vehicles are used in Paris, as hackneys—fiacres and cabriolets. The former are precisely like the coaches of London and New-York, except that they are kept in better order than those in London, especially within. The cabriolet is a large and clumsy kind of chair or gig, with a leathern top, extending forward farther than is usual in our topped chairs. It is drawn by one horse, and is wide enough to hold two persons, besides the driver, who sits with his passengers. The prices of both of them are fixed by law, and do not vary for any distance within the walls,—thirty sous for a fiacre, and twenty-five for a cabriolet.

The palace and garden of the Thuilleries, will excite the notice of a stranger, early after his arrival in Paris. The former is an ancient building, consisting of a large central pavilion, and two others on each side, at a distance from the centre and each other, and the whole connected by four ranges of buildings, forming one grand front of 1000 feet. Every order of architecture has been employed to embellish this noble front. The roof, however, is very steep, and is altogether too conspicuous to please a modern eye. The front of the palace is open to the garden; the side next the court is ornamented with a portico, decorated by Ionic columns and statues. The front exhibits eighteen marble statues, of Roman senators, and twenty-two busts of Roman generals and emperors. The garden of the Thuilleries extends about four hundred toises, (half a mile,) from the palace, to "Place Louis XV." and is about a quarter of a mile in width. This large space contains, on each side of the main avenue, a most delightful grove of large trees, chiefly of the horse chesnut, planted in rows, and with vistas passing through them in various directions. The branches of the trees are trimmed, or rather clipped with shears, in symmetrical shapes, so that every tree which faces

an avenue, has the same shape. The ground, beneath the trees, is an entire level ; not a blade of grass is allowed to grow in it ; and the decayed leaves are removed as they fall. Several *jets d'eau* play in the garden, in the midst of large basins, encased with white marble, in which swans are sporting, as tame as the visitors who observe them. Statues of marble and bronze, are distributed throughout this enchanting place. The garden is open to every decently dressed citizen ; and in the evening, in good weather, it contains thousands of people, who resort thither after the hours of business are over. Two centinels, one always a Swiss, are stationed at each gate. No person carrying a parcel or bundle, nor any one without a cravat, or long coat, is allowed to enter. Some of the avenues are lined with orange trees, of a very large size, growing in painted boxes. The Seine flows on one side of the garden ; and on this side a terrace has been raised, through the whole extent, from which there is a fine view of the river, and the city on the opposite side. The Thuilleries is the residence of the present king. Bonaparte sometimes resided here, but frequently changed his station to some other palace, for there are several others within the walls of the city.

13th. I called to-day, with W. Maclure of Philadelphia, recently arrived in Paris, on the Abbé Gaultier, and found him with a class of boys, composed of the monitors of different schools. This excellent man is a warm friend and promoter of the system of mutual instruction, as they here call the plan, which, in England, is denominated Lancasterian. The boys were undergoing, in his presence, an examination in grammar. To no person, perhaps, in France, is the erection of schools, and the extension of education among the poor, more highly indebted. Besides his exertions, in common with others, to establish schools on the improved system, he has published a variety of books adapted to that system, which are now in use in the schools. The mildness of his manners, and the benevolence of his countenance, impressed me very agreeably.

We also called on Count De Lasteyrie, who is likewise distinguished for his philanthropic efforts in the cause of education, and for his ingenious and persevering endeavours to introduce the art of printing on stone. He politely conducted us to his Lithographic rooms, where we saw the operation of smoothing the stone, putting on the colours, sponging, inking, and printing. The process is admirably

man being, and that too a delicate female be applied to air to a ball, and scattering around then rising, with majestic the atmosphere, and cannot fail to p ascent, we were this skilful ac scarcely mo mosphere. air, than

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carbonate of lime, of a the requisite polish, had on with a pencil dipped in An actual drawing is thus represented. The stone being of the press, a sponge, dipped in the ink is put the stone a soft substance, charged the same manner as that practised with The ink adheres to no part of the surface thoroughly wet, and of course it is only that part which has been previously covered with the paint that takes the ink, and produces the impression, when covered with paper, and subjected to the press.

14th. Most of this day was devoted to the Garden of Plants, or, as it is now called, "le Jardin du Roi." The King's Garden. The various establishments which are known by this title, do the utmost credit to the liberality of the government, and to the science of the nation. Besides agricultural and botanical gardens of considerable extent, adapted to practical, as well as scientific instruction, there are, within the walls, green and hot houses of more than 600 feet in length; a menagerie of wild beasts, many of them within large enclosures; an aviary, containing a collection of almost every bird known in France, and the neighbouring countries; a museum of natural history, more than 600 feet long; an extensive library; a cabinet of comparative anatomy; and an amphitheatre, in which public lectures are delivered on all the branches of natural history, and on general chemistry, on pharmaceutical chemistry, and on the application of chemistry to the arts. Most of the professors have, likewise, dwelling-houses within the garden.

15th. Dr. Price accompanied me to a lecture of Dr. Gall, the celebrated craniologist. He treated, in this lecture, of the evidences of different organs in the brain, deduced from its compound structure, and from a comparison of the brain and skull of different animals. He reasoned ingeniously upon the points he wished to establish. His manner is open and clear, and it cannot be denied, I think, that his talents are respectable; but it will be long, I suspect, before his principles can assume the form of a regular science, suscep-

tible of much practical application. Several females were in his class, and among them two dutchesses. It does not appear to me that his doctrine receives much support from scientific men, even in Paris; though I know there are some persons who consider them as substantially correct. His coadjutor, Dr. Spurzheim, has, I believe, been rather more successful in England, in gaining proselytes to their craniological theories.

16th. In order to see a little of the neighbourhood of Paris, we engaged this morning a fiacre, and rode to St. Denys, a village six miles distant. In the celebrated cathedral of this town, we were shown the vaults which are intended as the place of deposit for the remains of the present line of kings. The relics of Louis XVI. and Marie Antoinette are here, but the vault in which they lie is not opened to the public. We were shown the coffin of the late Prince of Condé. Some of the monuments in this cathedral are more splendid than any thing of the sepulchral kind I have yet witnessed; not excepting those in Westminster Abbey. This cathedral was almost reduced to a heap of ruins by the fury of the revolution, and its numerous relics scattered to the winds. Bonaparte took particular pains to restore it to more than its ancient dignity; intending it, I believe, as the sepulchral abode of his own family.

What a lesson to monarchs is contained in the voice which issues from the vaults of this cathedral! The bones of heroes and the dust of ancient monarchs are torn from them by the violence of popular indignation. A new and more powerful monarch succeeds, who repairs and beautifies these tombs, and selects them as the final repose of himself and his august race: but, before his head is silvered with gray, he is swept from his kingdom and country, and the ancient race is again restored, and has once more begun to people these subterranean abodes.

From St. Denys we rode to Montmorency, four or five miles farther, where we were shown the cottage which was for some time the residence of Jean Jacques Rousseau. Wishing to view the heights near the village, we were furnished each with a donkey; and thus mounted, in a style, which, to us, appeared truly ludicrous, we ascended the hills, with a boy running after us with a stick, to whip our beasts along, and point out the paths. Our feet almost dragged the ground, and we could scarcely avoid being convulsed

with laughter, at the figure which we cut, upon these almost contemptible beasts of burden. We enjoyed, however, very highly, a ride of an hour or two, in a way quite new to us all. The scenery and the roads, during this excursion, were interesting and agreeable. The village of Montmorency, and several other places, through which we passed, were crowded with visitors, all of whom seemed bent on the enjoyment of some sport, and particularly that of music and dancing. On our return, we stopped at Montmartre, a high conical elevation, just without the walls of Paris, almost covered with houses. On the summit are the ruins of a church which have been converted into a post of military observation, and surmounted with a telegraph. This hill, strongly fortified, was the last resource of the Parisians, on the approach of the allied armies. It completely overlooks the whole city, and the extensive champain around it. The keeper of the observatory, who explained to us the scenery, informed us, that he was on the hill during the whole of the contest, from the time the allies first appeared in sight, to the period of the surrender of the city. He recounted to us, with as much minuteness as we wished, the movements of the armies, and the destructive terrors of the conflict. The view of Paris, from Montmartre, will compensate any one for the toil of reaching the summit. Information of the birth of the son of Napoleon was communicated, we were told, from this hill, by telegraph, to Rome, and an answer returned, in one hour and fifteen minutes.

17th. I was introduced to-day, to the Chambers of the Institute, by Count Berthollet, and attended a sitting of that body. They occupy two large rooms, the walls of which are filled with books, forming a very extensive library. One of the rooms serves as an antichamber, in which the members assemble and converse, prior to the sound of the president's bell, which convenes them in the other room. I was struck with the general physiognomy of this learned body. A stranger, without knowing who or what they were, would certainly pronounce them to be men of strong sense. I am inclined to think that the French countenance is more expressive of character than the English. A narrow table extends along the four sides of the room, around which the members sit, facing each other, and in the intervening spaces are also tables, occupied by members. The president sits in the middle of the room, in a chair slightly

elevated above the rest. Strangers are admitted into the area, outside of the tables. Several papers were read by members, who remained at their places, without rising.

21st. The palace and garden of the Luxemburg, though inferior to those of the Thuilleries, are very large. The garden contains delightful groves and fountains, a great number of statues, and some jets-d'eaux. It is more elevated and more rural than the Thuilleries, and commands a better range of prospect. The palace is 360 feet long, and 300 wide. Within it are three galleries of paintings; many of which are from the pencil of Rubens, and among his most esteemed productions. Several of the finest pieces, however, which adorned these galleries, have been removed to the Louvre, to fill the vacancies occasioned by the restoration of the plundered treasure of other countries; but there is enough left in the Luxemburg to afford any person who has the least taste for painting, hours of gratification. There is, I think, in this collection, a greater proportion of large pictures, than in the gallery of the Louvre. Some of the best specimens of David's execution are here exhibited, and they appeared to me to be marked by a vigour of expression, and a strength and richness of colouring, rarely to be seen. Yet there was something in the general effect of almost all the productions of this great artist, which did not please me; I can scarcely say what it was, nor can I positively deny, that it may have been the effect of a prejudice derived from the uncouth features of this painter, as shown in the likenesses I have seen of him; and from those traits of his character which the revolution brought into view.

We met here W. F. R*****, a "Friend" from London, his wife, son, and four daughters. It is an uncommon thing for "Friends" to greet each other unexpectedly in Paris. S. R. Wood and myself, excite as much notice in the public walks, from the slight peculiarity of our hats and coats, as a Persian satrap, with his silks and turban, would do in Philadelphia or New-York. "Voilà le grand chapeau!"* is a remark which, in an under tone strikes our ears, as we pass through the crowd.

22d. Adet, the former minister of France to the United States, called and took me to see Vauquelin, who, as one of the professors, resides in the Garden of Plants. He was not at home; but we had a long conversation with two

* Look at the large hat.

sprightly old ladies, who live in the same house ; both of them sisters of Fourcroy, the late celebrated chemist. One of them talked incessantly for half an hour ; giving me the most remarkable proof of female volubility that I ever had enjoyed. Her subjects were all of a domestic nature, relating to individuals of their acquaintance ; but her animation and fluency, went very much to confirm me in the opinion, that the French language is better adapted than our own, to the rapid and easy movement of the organs of speech. The celebrated Abbé Haüy, also lives within the garden. We found him at breakfast. He received us with the greatest simplicity and ease, and, without ceasing to eat his fruit and drink his wine, began to converse about America and American mineralogists ; and evinced a very familiar acquaintance with the peculiarities of the United States, in relation to his favourite science. He took me into his cabinet, and performed a number of experiments on the electricity of the tourmaline, and other crystalline substances. He is an old man, bending under the weight of years, but active and persevering in his department, and of kind and affectionate manners.

23d. This being a day in which the public are admitted to the French palaces, we rode to St. Cloud, viewed the garden, and were escorted, in common with hundreds, and probably thousands, of others, through the different apartments of the palace. The situation of this palace is extremely fine. The gardens, in point of prospect and other local advantages, are much superior, and in relation to taste and decoration, but little inferior to the Thuilleries. The furniture, paintings, tapestry, and other ornaments, far exceed in splendour and costliness, any thing I had before seen. We were both surprised and amused, at observing, in one of the long rooms, a beautiful model of the triumphal column in the Place Vendome, on which the statue of Napoleon is still allowed to remain. On the real column in Paris, the statue has been displaced by a white flag.

We continued our ride to Versailles, and went through the palace and gardens of that distinguished place. The splendour of St. Cloud is lost in the magnificence of Versailles. Thousands were conducted, like ourselves, through the majestic saloons, galleries, and chambers, of this palace. The painted ceilings, the pictured walls, the size and number of the mirrors, the highly finished floors, the tapestry, the gilding, the exquisitely wrought furniture, admit of no

description that can convey an adequate idea of its sumptuousness. The gardens are proportionately extensive, magnificent, and costly. The artificial cascades and jets-d'eaux, are considered as the noblest in the world. At one basin alone there are eighty jets, some perpendicular, others oblique, issuing from dolphins, dragons, &c., all under the command of Neptune, who stands in the middle, surrounded with his water gods, pouring forth streams and torrents of water. The number of persons collected around this basin, waiting for the moment when the jets would begin to play, we estimated at 20,000! The machine at Marly, which raises the water that supplies these fountains, must have been, at the time of its construction, an admirable effort of mechanical skill. The fall of the river is but three feet, yet this fall is made to turn fourteen large wheels, and these work the forcing pumps, which lift, or rather propel the water, by three successive stages, to the reservoir which supplies the fountains. The machine raises about 800 hogsheads per hour, or fourteen hogsheads per minute. But the water-works at London bridge, with only four wheels, raise thirty-two hogsheads in a minute. The machine at Marly, is said to have cost four millions sterling; but I know not with what correctness. There are steam engines in England, which exert a force equal to this machine, which do not cost more than £10,000. In every part of this extensive garden, are waterfalls and jets, constructed in the most fanciful forms, with pavilions, arcades, large groves, shrubbery, flowers, and statues, almost innumerable. Toward the lower extremity of the garden is a canal, 1690 yards long and 64 broad, with two branches, each of which is 518 yards in length. At the bottom is another palace called the Grand Trianon, through which we were conducted. The furniture here is also very splendid. I noticed particularly a vase, or basin, about three feet in diameter; and a pretty large table, formed of malachite or carbonate of copper; both extremely beautiful. The Little Trianon is a small palace in another part of the garden, of much less imposing appearance.

The palace and garden of Versailles, and indeed nearly the whole town, (which contains about 20,000 inhabitants,) were built under the direction of that luxurious monarch Louis XIV. It appeared to me very reasonable to conclude, that the two palaces of St. Cloud and Versailles, with the gardens, furniture, paintings, and other appurtenances, as they now exist, would cost more than the whole city of New-York! Versailles is twelve miles from Paris.

24th. Adet called again this morning. We found Vauquelin at home, and had a pleasant conversation with him and the old ladies. He has a remarkably mild and agreeable countenance. Adet informed me, that Lavoisier's death, (one of the darkest deeds of the revolution,) was very much owing to his holding the station of farmer-general, an office against which the factionists discharged their most malignant venom. Had he been willing to take the advice of his friends, his life might have been saved; but relying on his own unblemished integrity, he persisted in a course of action which brought him to the guillotine. It is a fact, that Robespierre would not even give him time to finish an interesting experiment, by which he hoped to deduce an important chemical truth.

I attended the Institute again with Dr. P. The president for the day was De Rossel. The two perpetual secretaries, Delambre and Cuvier, sit on his right; and the vice-president, Vauquelin, on his left. The minutes and correspondence were read, and then several papers by the members; among which was one by Thenard. The sittings are well attended. It was very interesting to see men whose names make so conspicuous a figure in modern science, assembled at a board, which has done so much to extend the progress of useful discovery and improvement. Some of them are very old, particularly Haüy,* Lamarck, Lacepede, Berthollet,* and Delambre.*

25th. This day being the grand fête of St. Louis, and as it was to be held as such, for the first time in twenty or twenty-five years, (having been roughly pushed out of the calendar by St. Napoléon,) we were desirous to see how the populace of Paris would conduct themselves, particularly as great preparations had been made to celebrate it with unusual pomp.

In the forepart of the day, the crowd was most numerous on the boulevards; and along the river, in consequence of the procession of the king, attended by the military. This procession, which drew a vast concourse of people, terminated at the Pont-Neuf, where a new equestrian statue of Henry IV. had just been erected, and which was then to be installed in its place, in presence of the king and royal family. But the principal rendezvous, and theatre of diversion, was the Champs Elysées. This extensive field became crowded in almost every part, long before night. At a reasonable computation, there must have been 200,000 people

* Since deceased.

here assembled. Large stages were erected along the principal avenue, from which were distributed wine and bread to the populace, without cost. Part of the diversion consisted in making the people scramble for the wine. The stage was so high, and so closely boarded up on all sides, they had no means of getting at it but by clambering on each others' shoulders, and presenting their mugs, pitchers, and buckets to the officers on the stage. For this purpose, different parties clubbed together to support each other, and to oppose the rest. Sometimes the wine was drawn by the men on the stage, who were charged with the distribution, and when a vessel was handed them, by a successful climber, they filled it, in whole or in part, and the boy, after drinking himself, handed the rest to his companions. On other occasions, they bored a hole through the side of the stage, and inserting a tube through this hole, they connected it with the pipe of wine, and allowed it to run through in a constant stream. In the struggle to catch it, a good deal was lost, but the greater portion found its way into one or other of the numerous contending pitchers and buckets.

The same strife was kept up, in endeavouring to seize the thousands of loaves of bread and sausages, which were thrown out from other platforms, erected for that purpose. In another part of the ground, high poles, like the masts of a ship, were firmly erected, made perfectly smooth, and slushed all over with soap. At the top of each of these poles a large hoop was suspended, decorated with leaves and flowers; and to each of them were attached watches, gold rings, silver cups, and other valuable articles. These were the prize of him who should be successful in climbing to the top. Around every pole were, probably, a dozen or twenty competitors. They were allowed to take up a little straw or dust with them, to wipe off the grease, and facilitate their progress, but no instruments. The effort was a severe one, and none succeeded until after hours of reiterated effort. A string of them would sometimes be seen on the pole—the upper one would give out, and occasionally slide by the others, but very frequently bring them all down with him to the ground. Rope dancing and tumbling, both by male and female operators, fiddling, stage playing, puppet shows, and a variety of other diversions, were in constant operation, upon wide and open stages, erected around the field. Refreshments of all kinds were to be had. To increase the effect of this grand fête, (which, it must be

remembered, cost the spectators nothing but their time and their taxes—things they seem to care not much about, if they can but have a *grand spectacle*.) Madame Blanchard again ascended, from the centre of the largest open area. We obtained a station very close to the balloon. The evening was extremely fine, and scarcely a breath of wind to be felt. She rose very slowly, frequently emptying a bag of sand to promote her ascent. Sometimes she sat down in the car, and then rose up to show herself, waving her flag to the thousands of gazing spectators. The flag, at a great height, slipped off the rod and fell. She immediately took out her white pocket handkerchief, and fastened it on the rod, waving it, as she rose slowly toward the clouds. She at length applied her match to the train of powder, and was immediately surrounded with the blaze of rockets, flying in every direction, and cracking like the noise of a hundred pistols. When the fireworks had ceased, the figure of a beautiful star appeared under the balloon, and remained visible, until the balloon, which was itself illuminated, disappeared, either in consequence of its great elevation, or of the interference of some light clouds which were floating at a great height in the air. The latter appeared to me the most probable.

We returned from this scene of crowded novelty, of gayety, and of nonsense, astonished at the good order which every where prevailed. Not a single instance of drunkenness, or of quarrelling, notwithstanding the eager strife of the very lowest classes, for the wine and the sausages, occurred to our notice during the whole day. It is true, *gens d'armes* were every where mingled with the crowd, ready, at a moment, to check any disorder; yet it is impossible to avoid the conclusion, that the national temperament of the French, in times of national tranquillity, is more favourable to decency of manners, to good humour, and the civilities of social intercourse, than that of either England or America. The illuminations of the whole Champs Elysées, the Garden of the Thuilleries, and most of the public buildings, produced a splendour not easily imagined; and the discharge of numerous fireworks terminated the *fête of St. Louis*, doubtless, very much to the content of his successor, and of his liege subjects in the great city of Paris.

26th. I visited, to-day, M. A. Jullien and the Bishop Gregoire. The former is a gentleman much interested in schools and other benevolent concerns. The latter was

formerly bishop of Blois, but lost his favour with the dominant party in religion and politics, in consequence of the liberality of his religious opinions, and his dislike to oppression in every shape. His publications in favour of the blacks, and the general benevolence of his character, are well known. If his mind is not characterised by the very strongest traits of genius, it is distinguished by the clearest evidences of Christian kindness, and the love of his fellow creatures; and well would it be, I think, if much of the *mere genius* of the world could be made to give way to qualities of such a nature as these. I learned from the abbé, that one of the objections advanced by the Catholics against the general circulation of the Bible, is, that certain parts of it, particularly the book of Leviticus and the Canticles, were liable to be misunderstood and abused, particularly by young people. The frank and kind reception I met with, from both these gentlemen, was very satisfactory. Dr. P. introduced me, in the course of this day's round, to Thenard, the able professor of chemistry in the College of France. We found him in his laboratory, engaged in experiments. He stated to us some discoveries he had just made, relative to the super-oxygenisement of acids, by means of barytes, and the evidence of the discharge of the additional oxygen, by the agency of silver.

27th. I went, with some friends, to see a gymnastic school, kept by Amonton. The boys were exercised in jumping, climbing, walking on stilts, and other bodily manœuvres. A systematic course of instruction, with proper exercises, on the right use of their limbs, I have long thought, would be very advantageous to boys. The person, who gives this instruction, endeavoured, some time ago, to establish a school at Madrid, on the plan of Pestalozzi; but the effort was not very successful.

27th. We breakfasted this morning at the *Caffé Zoppi*, Rue des Fossés St. Germain des prés. This coffee-house was formerly the rendezvous of Voltaire, Rousseau, Fontenelle, and other literary men of the last century. The newspapers, and several literary journals, are taken for the benefit of those who are inclined to mingle politics with their coffee; but there was nothing in the appearance and conversation of the guests we met there, that seemed to have any connection with the wit and humour, the poetry, politics, and irreligion of former days.

With W. Maclure, of Philadelphia, whose generous

efforts to promote the advancement of science in the United States, have justly obtained for him the presidency of the Academy of Natural Sciences in Philadelphia. I went to the School of Mines, in Rue d'Enfer. We found a ready admittance to the collections of this distinguished and important school. It occupies the rooms of the Hotel Vendome, a small palace, erected formerly for one of the sons of Louis XIV., situated in the rear of the Luxemburg. The collection of minerals, in this institution, if not so splendid as that at the Garden of Plants, is more valuable. It is, in all probability, the most instructive collection in the world. The foreign specimens are arranged in horizontal cases, in a lower room; and the native minerals, in vertical cases, in a suit of six or seven apartments, above stairs. The latter are disposed of geographically; that is, the cases are marked with the names of the departments, and within each division are placed the minerals of that particular region. It is thus very easy for the pupils of the school to become acquainted with the peculiar mineralogical features of every department in France, without leaving the capital. It contains also a collection of rocks, presented by Werner, the great father of modern mineralogy, at Friburg; and Cuvier and Brogniard's collection of the minerals around Paris. In other apartments of the building, are furnaces, chemicals, and all other necessary accommodations, for the analysis of mineral substances. This school is composed of three classes of pupils; viz. a French class, who are retained by the government, and whose expenses are paid; another French class, who pay their own expenses; and a class of foreigners. Among the latter, are two young men from Philadelphia, whose acquirements in mineralogy and mining, are very meritorious, and whose skill and science will, I hope, be employed for the future benefit of their country.*

29th. The museum of French monuments, is well entitled to the notice of a stranger. It consists of a collection of altars, and monumental pieces, preserved from the fury of the populace, when, during the revolution, the property of the church was confiscated for the use of the nation. They are not very numerous, but many of them are interesting; some for their antiquity, and others for the delicacy and perfection of the sculpture. They are arranged

* One of these gentlemen, now holds a professorship in Columbia college, South Carolina, and the other a similar station, in the university of Pennsylvania.

in halls, according to the order of time, commencing with the mouldering altars of the ancient Gauls, and thence, in succession, from the thirteenth to the eighteenth century. The names of no inconsiderable proportion of the great characters, who have figured in the political and literary history of France, are here exhibited in a style of execution, as various as the lives of those whose names the chiselled marble is intended to commemorate. This is the Westminster Abbey of Paris; though unlike the collection in that hoary edifice, its relics are not in their original situation, but brought together from various parts of the city and country, thus constituting a real museum of tomb stones and monuments.

But the serious traveller, how delighted soever he may be at the display of so much of the truly sublime and beautiful in human art, must, on viewing such collections, feel the force of that poetic interrogation,

Can storied urn, or animated bust,
Back to its mansion call the fleeting breath?
Can honour's voice provoke the silent dust,
Or flattery soothe the dull cold ear of death?

To the "cold ear" of departed heroes and philosophers, this flattery is utterly lost. It is only, therefore, from its effect upon the living, that such a vast expenditure of time, and talent, and substance, can be justified. But who are they, that are thus held up to the admiration of posterity, and whose names and deeds are transmitted, through the impressive flow of centuries, by the most laboured efforts of human art? Are they not, very often, those whose pathway of life has been strown with the tears and miseries of their fellow-creatures;—heroes, that have rode "through slaughter, to a throne;" and philosophers, whose moral creed has dropt poison into the fountains of human happiness?

In the court of this "museum," overhung by cypress and willow, are the ashes of Moliere, La Fontaine, Boileau, Descartes, Masillon, Montfaucon, and one or two heroes of the sword.

We visited, among other places, to-day, the model of a fountain, which is to be erected on the very spot, where formerly stood the Bastile, of direful despotic memory. This fountain is to be a bronze statue of an elephant, seventy-two feet high, with a tower on his back. In one of his legs, there is to be a stair-case, ascending to an apartment in his body, and from thence to the castle. The centre of

the castle is to form the reservoir, around which is to be a gallery, wherein the visitors may walk, and from which they may view the city in any direction. The jet-d'eau is to issue from the end of the elephant's trunk. A model of this huge thing, of the size intended, has been made in plaister, and is shown to strangers, under a very large shed. When a foreigner wishes to view objects of this nature in Paris, he has only to present himself to the proper person, state his request, show his passport, and leave his address. A written permit is afterward sent to his lodgings, which gives him leave of admission, without cost. The pedestal, on which the elephant is to stand, has been long completed; but the main work, like many others projected under the great emperor, remains nearly "in statu quo, ante bellum." But the number of improvements which he did effect in the city; the new works erected, and the plans of improvement suggested and commenced, are astonishingly great; and so important are they, generally, not only to the beauty, but to the improvement of the city, and the real comfort of the inhabitants, there will not be wanting to the Parisians, for ages to come, daily mementos of his industry, and his qualification to do good, when he was disposed to exert it.

30th. I spent the greater part of this day in the lecture room of Charles, an old and veteran professor of philosophy. He has been engaged nearly thirty years, in collecting apparatus, and in delivering lectures.—Though upward of seventy years of age, he is still an active man, and a good lecturer. His collection of instruments far exceeds, in extent, elegance, and costliness, any thing that I had ever expected to see. Its value was estimated, a considerable time since, at upward of 150,000 francs. My opinion, previous to hearing of this estimate, was, that £10,000 sterling would not produce such a collection, at the present day. He has devoted much of his time to the invention of apparatus, and improvement of the kinds already in use. His optical and electrical machines, are splendid and beautiful. He has three or four pneumatic tubs, with sliding shelves, the whole of which, except the corners and edges, are of *plate glass*. They contain, each, about two cubic feet of water. He performed a variety of experiments, on light and electricity, for our amusement.* Most of this collection has been made in Paris, by Dumotiez, except the optical instruments, many of which are from London.

9th month, 3d. The cemetery of Père La Chaise, just

* This philosopher died in 1823.

without the eastern wall, will hardly fail to gratify the visitor. This celebrated burial place, was formerly a chateau, and grounds, given by Louis XIV. to his favourite confessor, Père La Chaise, who bequeathed it, for the purpose for which it is now employed. Every citizen, without distinction of sect, may purchase the right of burial in this cemetery, including a certain space of ground, which is granted to him for ever. There is, accordingly, on the side of a hill, within the enclosure, a number of family vaults, recently erected, with great neatness. This cemetery deserves to be visited by every foreigner, who wishes to become acquainted with the character of the Parisians. It is questionable whether any two of the monuments or tomb stones are alike, in the whole of this very large ground, and none of them are similar to those common in America. They are, however, almost universally characterised by neatness and delicacy of taste. Many of them are very rich and costly. One of the first which attracted our notice, was a large and expensive monument, containing the remains of Heloise and Abelard. They were removed, not long since, from the museum of French monuments, and deposited in this place. Almost every grave is surrounded by a neat railing, either of iron or wood, and the enclosure is planted with the choicest flowers; while wreaths of leaves and flowers are seen hanging on the monumental stone. Once in a year, at least, and on a fixed day, the relations and friends of the deceased repair to the spot, and renew the testimonials of their attachment to the dead, by cultivating with care the flowers which had been planted, or by planting new ones in the room of those which are decayed, and hanging fresh wreaths on the tombs. Thus, instead of the lugubrious images of death and desolation, which the cemeteries of other countries too frequently exhibit, these people strive to render their burial grounds subservient to their love of variety and pleasure, and to the removal of that dread of our final change, which they consider as too apt to acquire, in some minds, a morbid influence.

The prospect of the city, from the heights of Père la Chaise, is very fine.

On our return, we attended an examination of the pupils of a school, entitled "L'Institut Academique des nations Européens." Neither the appearance of the room, nor the exercises of the boys, had much to correspond with this pompous title. A considerable audience of male and female

visitors was present, mostly relations of the scholars. Two of the boys answered questions in logic, and recited each a portion of a sermon. Several of them construed a page or two of Greek, Latin, English, and German; and one performed an exercise in mathematics. One of the instructors read an address to the scholars, and to the audience, and to make it more emphatical, it was written in verse, and delivered with strong gesture; but a French gentleman, who sat near me, and who is a writer of some note, told me the poetry was not good. The prizes were then delivered agreeably to a written statement of the progress of the scholars, read by one of the teachers. They consisted of books, very handsomely bound. When the boy's name was pronounced, he came to the table, the prize was delivered to him by an elderly gentleman, a wreath of flowers was put on his head, and a band of music then cheered him to his seat. Those of the boys who had female relations present, went to them and received a kiss before they sat down.

4th. I visited this morning several persons, prior to my departure for Switzerland. Among them were Count Lascyrie, Bishop Gregoire, and the Abbé Gaultier,* with whom I had much interesting conversation relative to schools and to the prejudices of the clergy and people of this country. These individuals are all influenced, I believe, by benevolent motives, and are remarkably free from prejudice. The two former exert themselves notably in the cause; and rejoice in the success, of the system of mutual instruction.

A large proportion of the schools in France, are taught by a fraternity, styled "Les Frères de la Religion Chrétienne." They assume a peculiar dress, and from long custom, consider it their privilege, (as it has become their means of support,) to educate the youth of the country. These men have, of course, opposed the new system with great zeal. It is nevertheless making its way with rapidity, and even the "Frères" find that their custom, instead of diminishing, is increased by the general stir. The schools, however, of the new system, are still confined to the children of Catholics. The influence of the priests is so great, it is thought necessary to conform to the prejudice, and the Protestants are, accordingly, obliged to open separate schools for their own youth.

* This philanthropist died in 1818.

Count Lasteyrie is one of the first who embarked in this concern, and who advised the formation of a society for the promotion of education, upon the new plan. If this had not been done prior to the king's restoration, it is doubtful whether the system could have gained admission into the country; and were it not for the weight and influence of the society, it would still have to struggle with difficulties almost insurmountable.

5th. I called this morning, with a friend, to see Professor Berzelius, of Stockholm, who has lately arrived here with the Swedish minister. He is rather a young man, of open and pleasing address, and of social, easy manners. We spent an hour and a half with him in conversation, on subjects of science. He showed us a portion of the new metal called by him selenium, and exhibited to us some of its properties, by the blow-pipe. He carries with him a neat collection of instruments, for the analysis of minerals in the dry way, done up in a folding leather case of small compass. He intends to remain in Paris all winter.

I met to day the Rev. J. Owen, secretary of the British and Foreign Bible Society. He intends making a tour through some parts of the continent, to advance, if possible, the cause in which he has so successfully laboured at home. He has printed several tracts, in relation to the Bible, since his arrival here. Nothing has yet been done in Paris, nor, I believe, in any part of France, in the way of a society to promote the circulation of the Scriptures. Jesuitical influence is too powerful to expect much; yet there is reason to believe that the wedge of reformation has been entered, and that the knotty fibres of opposition and prejudice, may be made gradually to yield to the operation of that Spirit which works by love.

I received a visit in my room from Gay Lussac. He is a much younger man than his reputation would have induced me to expect. His person and manners are interesting, and his talents, as a chemist and philosopher, of the first order. He appears to be interested in the success of elementary schools. It will require, he observed, 30,000 schools to supply all France, and there is yet established but about one sixteenth of that number.

6th. A stranger in Paris will find it more economical, and generally more agreeable, to stipulate with his landlord for the accommodation of his lodging-room only; and to take his meals without;—that is to say, his breakfast at a café, and

his dinner at a restaurateur. Nothing can be more convenient than those eating houses, not only to the immense concourse of strangers, that now frequent this city, but to great numbers of the Parisians themselves. The coffee rooms are very numerous. They are open from eight o'clock (or earlier in summer) till noon, or perhaps later. In those of a respectable rank, the breakfast rooms are furnished with great neatness, and even splendour. Marble columns, so adjusted as to produce an *effect*, and other ornaments, are reflected by numerous large mirrors, tastefully arranged around the room. On one side is an elevated seat, with an elegant desk or counter before it, frequently ornamented by an impending canopy. At this seat, is stationed a female, generally selected for her personal attractions. She is the presiding genius of the establishment, repressing by her presence, and by the gentle but effectual superintendence of her eye, any irregularity or indecorum among her guests; and controlling the servants in the discharge of their duties. She receives, with singular grace, the money of her visitors, and replies to any observations they may make with finished politeness. The usual breakfast at those places, is a large cup of coffee, a fresh roll of bread, a *flute* or long slender roll of a sweet and very light kind of bread, with a quantum sufficit of loaf sugar and butter. The latter article is served up in the shape of a long ribbon, nicely laid in folds on the plate. The sugar is brought in a small dish in lumps, and if there be a superabundance, which is frequently the case, the visitor assumes the liberty, as we very often perceived, to put the residue in his pocket—a singular practice, but sanctioned by common usage. The French coffee is very superior to the English; and generally better than we have it in America. The waiter at the *café* enters with two burnished metallic pots, one containing hot coffee, and the other boiled milk. He pours out the coffee, till directed to stop, and then overflows the cup with hot milk. I was not before aware how much the boiling of the milk adds to the richness and flavour of the repast. The price for such a breakfast is generally one frank, (=19 cents,) which includes the privilege of reading the newspapers.

The restaurateurs, or eating houses, embrace a far more extensive range of solid and fluid comforts. On entering one of these houses, and seating one's self at a small table, covered with a neat white cloth, a printed paper is presented, containing a list of all the varieties which the house

affords ; potages, hors d'œuvres, entremets, fricaseés, ragouts, pâtisserie, and desserts, with wines and liqueurs of all kinds. The price of so much as an individual ordinarily requires, is attached to each article. Hence a person may call for just what he pleases, and pay for no more than he calls for. My companions and myself have generally taken our dinners at a restaurateur, kept within the palace of the Louvre, by the family of the Swiss porter. The situation of the room was remarkably fine, overlooking the Seine and its opposite bank, with the Pont des Arts immediately in front, peopled with all ranks and nations. The guests were waited upon by two grown daughters of the master of the house, always neatly dressed, and, in all their attentions to the company, performing their duties with a gracefulness rarely to be met with, in persons of the same rank, either in England or America.

The price of a dinner, at such a house, including a dish of soup, two dishes of meat, bread, vegetables, a dessert, and half a bottle of wine, may vary from three to five francs, according to the rarity or expensiveness of the articles called for.

In those eating rooms, one meets with a great variety of company of both sexes. It is no unusual thing for a respectable tradesman, or other decent citizen, to bring his wife and children to a restaurateur, for an occasional dinner. It saves them some trouble and expense at home, and, what is probably of greater consequence, enables them to see a little more of the "grand monde." I have not observed in the eating rooms of Paris, notwithstanding the vast variety of character one there meets with, any other than perfect decency of deportment.

The French are very punctilious in the observance of external civilities. Politeness is interwoven with the national temperament and character ; and although it may not extend much beyond the ceremonials of behaviour, it is really more agreeable to be treated by a stranger with graceful ease and kindness, how superficial soever the motive, than, upon equal terms, to experience only the chilling formalities of indifference or reserve.

The city of Paris is divided into two nearly equal parts by the Seine. This river is here considerably less than the Thames in London, both in width and depth. It contains an island of no small dimensions, near the centre of the town, connected with each shore by several stone bridges.

This island is so compactly built as to have received the common appellation of la Cité. The quays, or borders of the river, furnish so different a scene from those of New-York, Philadelphia, and other commercial towns, as to strike every American with the force of the contrast. Instead of large ships with their groves of masts, and the noise and bustle of carts, cartmen, and porters, in the transportation of bulky wares and merchandise; and tall ware houses and their counting rooms, all indicative of an extended foreign commerce,—the river Seine contains half a dozen or more of large scow-form boats, loaded with hay or charcoal, quietly stationed in the stream: other large boats are safely moored in the current, filled with washer-women, whose tongues are in as rapid motion as the paddles with which they strike the clothes, while numerous batteaux are plying from place to place, on some trifling concern, either of business or amusement. A thick wall, three or four feet high above the pavement, protects the foot passenger from the river, throughout the whole length, nearly, of the city. The top of this wall, excepting in very bad weather, is covered with books, to the extent, probably, of miles. Numerous shambles are also placed along the wall, on which are exposed for sale, a most curious variety of articles, old and new, and mostly at very moderate prices; and with these are intermingled show-men and show-women, tricks of various kinds, fruit and other eatables, lemonade and liqueurs, carried on men's backs, in long tin vessels, and other etceteras, in a most diverting profusion. I have been really surprised at the prodigious number of books that are printed and offered for sale in this city. Not only are the book stores large and numerous, but the quays, the boulevards, and other public places, are replete with shambles and shelves, loaded with books. Rare and valuable works, in almost every department of literature, may often be obtained at those places at very moderate prices. Print shops, and exhibitions of prints, are more numerous in Paris, than in any place I have seen. The French delight in caricatures; and they get them up in a style of great point and humour; though it is to be regretted that they are too seldom designed to produce a moral effect. That sketches of this nature may be rendered subservient to serious moral impressions, has been proved by Hogarth; and it might be the occasion of surprise, that so few attempts have been made to follow up the plan of pictorial tales of instruction,

so ably commenced by this great painter, did we not know, that it is chiefly the weak part of our nature,—a taste for the ludicrous and the witty,—that derives pleasure from those inferior productions of the graphic art.

The national antipathy to English habits is shown in the French caricatures. In our boyhood we were taught, by the tales we read, to consider a Frenchman, living upon his soups and frogs, as a meagre creature indeed, compared with the rotund figure of a beef-eating subject of John Bull's dominion. But in Paris, they just reverse the picture—and in a print now very fashionable on the boulevards, an Englishman is represented, coming to France, in the form of a tall walking skeleton, with an eager and anxious countenance; and after spending some time industriously among the restaurateurs, he is seen, on his return, pushing a wheel-barrow before him, on which the anterior portion of his mortal fabric, now so enlarged, finds a convenient and necessary support.

Very few Englishmen, and still fewer Americans, will be induced to consider Paris, *on the whole*, as an elegant city. The gardens and public squares, the palaces and private hotels of the nobility, and of some wealthy citizens, are in a style of magnificence unequalled, as I believe, by any town or city in Great Britain; and in the United States, we have certainly nothing that bears any comparison with them. The boulevards, also, combine the advantages of a wide and beautiful promenade, with a display of superb mansions, public fountains, tea-gardens, shops, &c. They consist of a very wide street, which extends in an irregular circle, nearly around the whole city, forming a circumference of almost seven miles. Two rows of majestic elms grow upon each side, whose branches almost interlace each other, forming a natural arcade on each side of the centre. The space between them is gravelled, for the benefit of foot passengers. This extended and remarkable promenade, was once the boundary of the city, and at that time was covered with turf, and much resorted to for playing at bowls; hence the name Boulevard,—an abbreviation of “*boules sur le vert*.” This is, in all probability, the most commodious, and most frequented public walk in Europe. Here all classes have the liberty of amusing themselves; and it is here that the gayety of Paris is witnessed in its most variegated forms. In the afternoon and evening, these walks are lined with a double or treble row of chairs, which can be hired by the passengers for a sous each—a

rate so cheap, that the fashionable loungee can sometimes afford to appropriate five of them to his indulgence, one for his body and one for each of his four limbs, while the motley group which surrounds him, contribute not a little to his entertainment. In this multifarious assemblage, are ballad singers; dancers, both children and dogs; conjurors; puppet shows; merry Andrews, and fortune tellers; men with castles inhabited by white mice, which play a thousand antics in its different apartments; fortresses guarded by a regiment of Canary birds, which perform their evolutions with great precision; caricaturists or grimaciers, who change their faces into a rapid succession of odd and singularly grotesque forms, which no risible muscles can well withstand: these, and many other contrivances, are performed with unwearied exertions to please, and by persons thankful for the voluntary sous which may be thrown them. Intermingled with these tricks, is a display of fruit women and flower girls, musicians, hydrostatic experiments, and other allurements, which convert the boulevards of Paris into a place of daily amusement, highly characteristic of the people of this metropolis and nation.

But abstracting these public places and buildings, Paris has no external attractions to recommend it. The houses are very high, and of a clumsy and antiquated style of architecture. The streets are narrow, dark, and dirty; and without sidewalks for foot passengers. They are excessively crowded by wheel carriages, and pedestrians of all descriptions; especially women and children. The safest place to walk, is generally in the middle of the street; but it requires no little care and dexterity, to avoid the contact of wheels; or, at best, the mud and dirt that fly from them. The axletrees of the carts, too, project outward to an enormous and needless length, and increase the danger.

The shops are not, in common, so elegantly dressed out as in London; yet those in the Palais Royal, and a few other places, are as sumptuous and attractive as the most splendid fabrics, artfully and tastefully arranged, can possibly render them.

There is a curious jumbling together, too, of odd circumstances in France. The same associations do not seem to prevail here, that we find on the other side of the channel, or of the Atlantic. A whole family will live in splendour in the fourth story of a house. A number of gentlemen's houses open into one and the same front court, which com-

municates with the street by a massive gate. The stables are often found under the same roof with the owner and his family ; so that while the minister or peer is entertaining his guests in a superbly furnished saloon in the second story, his horses are enjoying their repast in the apartments immediately below.

We have seen no reason to believe that the opinions entertained in Paris, relative to the Christian sabbath, are different from those which we were induced to suspect on our first entrance. There are few, very few indeed, who appear to regard it as a day peculiarly designed for worship. The Catholic churches are open, and a priest is in attendance every day, for the benefit of those who incline to present themselves before the altar ; and every person is at liberty to go at such times as he may feel his mind most strongly impelled to the performance of this duty. It is only on feast days, that the obligation is considered stronger than ordinary, to assemble in the churches ; and those fêtes are as likely to fall upon any other day of the week, as upon the first. This day seems, accordingly, to be regarded as the signal of a relaxation from business, and a devotion to amusement and pleasure. But where there is no actual prohibition against labour, industry or avarice will prompt many to continue their work. Hence, during the forepart of the day, but little difference is observable between this and other days. The shops are open, mechanics are at their employment, and the streets exhibit the usual stir of business and activity. But in the afternoon, the instruments of labour are laid aside, and instruments of music take their place. The gardens, boulevards, and other public places, are thronged with the giddy multitude. The theatres are all crowded, illuminations take place, and dancing and festivities conclude, at a late hour, the Parisian mode of observing the Christian sabbath.

The present king has attempted, by special decrees, to prevent these excesses ; but the current of popular feeling appears to be too strong to be thus resisted.

What, it will naturally be asked by the sober Christian, is the result of all this ? Can the dedication of one day in seven to the worship of the Almighty, and to the exercise of pious contemplation and communion, be dispensed with, without an obvious dereliction of religious faith and practice, and a consequent relaxation and abandonment of moral principle ? What is the actual state of religion in such a country ?

It would, perhaps, be presumption in me, to attempt to reply to these questions, with such limited opportunities of judging, as a month's residence in France must be supposed to afford. I can only, therefore, state my impressions, as derived from the facts presented to my notice. I have several times entered the churches, when I have found them open, as strangers are always at liberty to do. A few persons, (and seldom more than a few,) were seen kneeling on the pavement, in different parts of the building, either intent on the priest, as he moved about the altar, bowing and kneeling before the crucifix, and repeating the different parts of his formula; or pondering over the books which they held in their hands, and occasionally reciting parts of them in a low voice. On the countenances of some of these, devotion seemed to be strongly marked; and not unfrequently were they wrapt in grief. But by far the greater number of those whom I thus noticed in the churches, were persons of the lower classes of society, and most of them females. Never, excepting on some special occasion, was the number of assembled worshippers very considerable, and rarely did it comprehend people of genteel condition. That persons in the higher ranks of society, are not at all in the practical performance of public worship, I by no means assert. My means of information have been too limited to enable me to form a judgment. But from all that has appeared during my stay in Paris, I might safely draw the inference, that a single large place of worship, would be sufficient to contain all the devoted Christians, who punctually attend to that duty, in this great city. With regard to the general morality of the people, I may be prepared, perhaps, to form a more correct judgment hereafter.

LETTER XII.

Geneva, 9th month (Septem.) 17, 1818.

MY DEAR ***** AND *****,

HAVING agreed with my friend and fellow-passenger, J. B. S. of Philadelphia, whom I met here after our separation in London, to accompany him to Switzerland, we took our departure from Paris, on the 8th, in a neat travelling carriage, which he had obtained at Brussels. We were joined by a gentleman of Boston, journeying like ourselves, for health and information. We have also a Flemish ser-

vant, which my friend S. had engaged at Brussels ; one of those honest and handy creatures, who are in the practice of hiring themselves to travellers as servants, interpreters, and pioneers, through the different countries of Europe. Persons of this class, when they have acquired an established reputation for honesty and fidelity, prove extremely serviceable to those that engage them. They acquire, in their various journeys, a great deal of local and general information, which it is their interest and pleasure freely to communicate. It is of the utmost importance to a traveller, to be previously well assured of their integrity ; for it is continually in their power, if they are so disposed, by collusions with innkeepers and attendants, to defraud their employers. There are, besides, many things that will necessarily be entrusted to their discretion, which involve, not only the pecuniary interest, but the comfort and safety of the traveller.

Our carriage being a calash, and fitted with a shaft, it comes under the denomination of a " Limoniere," and we are permitted to go with three horses, one in the shaft and one on each side, driven by a postillion, riding the near horse, and equipped with a pair of boots, into which a small man might jump from the height of several feet. The structure of these boots, it is presumable, has not varied since the time of Louis le Gros. They are more clumsy and heavy than any one would believe who had never seen them, and yet they are worn generally by the postillions in France. Our horses were not bad, and being well adjusted to our elegant new carriage with *strong ropes*, we cleared the city by the Barriere d'Italie, and flattered ourselves that the dust of a protracted drought, had been effectually laid by a smart shower which fell in the city before we left it : but we found that the rain had not reached much beyond the walls, and that clouds of dust must be our portion. This road was very straight and wide, with a broad pavé in the middle, and ornamented with rows of elms, trimmed nearly to the top. The fields are entirely without enclosures, and appeared very brown, from the long continued dry weather. I remarked, however, that the lucern was very green and thrifty. Whether this grass always sustains a drought better than clover, is a question of some importance in practical farming, and which I cannot at present solve. The country in general is level, and well cultivated. Numerous chateaux appeared in sight, and village after village kept our attention

alive. We passed through Ville Juif, Fromenteau, Essonne, Ponthierre, and Chailly ; at each of which places there is a post royal, and a relay of horses. We pay for the three horses six francs per post, and to the postillion thirty sous, equal to one and a half francs. Occasionally, for extraordinary driving or cleverness, we may pay more. The law allows them but fifteen sous per post, but custom has taken the liberty to double it, and her dictates are much more imperious than some of the royal mandates ; that, for example, which enjoins the good citizens of Paris to keep their shops shut on the sabbath day. Essonne is a handsome village, of 1500 inhabitants. In its immediate neighbourhood are several manufactories of printed calicoes and woollen goods, with some chemical establishments. A little beyond Chailly we entered the forest of Fontainebleau. In order to avoid the rough pavement, and the sand on each side, we took a by-road among the trees ; and, for the first time since I have been in Europe, could I easily have fancied myself in one of our native woods. Nature indeed has been but little disturbed in this forest for ages. The trees, when stricken with age, or symptoms of much decay, are cut down, and converted into fire-wood. They are large and majestic, consisting principally of beech and elm. This forest is twelve leagues in circumference. It has for ages been a favourite resort of the French monarchs, for the pleasure of the chase. The wild boar has still its haunts in its shades, and the same trees have extended their branches over the forest parties of Louis VII. and Louis XVI., of Henry IV. and of Napoleon. In some places, as if to remind us still more of home, the wood, which had been felled, was cut into lengths, and piled or corded just as in our woods. The surface of the forest is very broken, and its geological features appeared different from any thing I had ever seen. Very large rocks cover the ground in some places, in rounded masses, exceeding in size any of the boulders I ever saw in America.* They give an aspect of grandeur to the forest landscape. The chalk hills, which so much prevailed on the other side of Paris, have not appeared in this day's ride.

We arrived at Fontainebleau, fourteen and a half French leagues from Paris, at 6 P. M. This town, containing about 9000 inhabitants, completely surrounded as it is by the forest, may be considered as a royal exotic, planted here

* I since find that there are rocks of this description even within the limits of the city of New-York, probably quite as large as those in the forest of Fontainebleau.

for the purpose of gratifying the senses of majesty, in its hours of pleasurable indulgence. The chateau, or palace, has been built at various disjointed epochs, and by monarchs of very different fancies ; and hence the architecture of different parts is extremely dissimilar. It is a large palace, sufficient to contain, I should conjecture, several hundred families, allowing to each as much space as a common dwelling house. The gardens, in which we walked, are extensive, and kept in good order. They contain no statues, nor did we see any jets-d'eau ; but there are several beautiful fountains, large, and of various shapes, in which swans were moving with their accustomed grace and beauty. In one of them, a brood of young swans, nearly grown, accompanied the old ones. Their plumage was a dusky brown, that of the old ones perfectly white. We put up at the Hotel du Ville de Lyon, a neat and tolerably decent inn, and I believe the most respectable in the place.

9th. In every well furnished bedroom in France, which I have seen, there is a neat and very convenient secretary, besides a case of drawers for clothes. An Italian princess, from Rome, and her attendants, were our inmates at the inn. They were travelling in two carriages, drawn by black mules. The forest continued for some miles south of Fontainebleau. At a league distant, we passed a cross, erected on the spot where Napoleon met the Pope, in his journey from Rome, to attend the consecration. How fit an emblem, is this post, of the instability of worldly things !

Nemours, four leagues from Fontainebleau, is a town of 5000 inhabitants, on the river Loing. I was pleased to see, as we rode through it, in large letters, on a neat building, "Ecole d'enseignement mutuel : " * it affords one evidence, at least, that this system is beginning to spread through the country. To Croisiere, three leagues. The hilly, and wild appearance of the country about the forest, has changed to a level and fertile champain. To Fontenai, two leagues, and thence to Puits-le-Laude, two more. A beautiful canal borders the river Loing, and is fed by it. To Montargis, two leagues. We passed two very large manufactories of paper, on the Loing, established by Duperron. Montargis contains 6 or 7000 inhabitants. This town was anciently called the cradle of France, because, on account of the purity of its climate, the queens resorted to its castle, previous to their accouchement. This castle was built by

* School of mutual instruction.

Charles V., but it is now in a state of dilapidation. It contained a hall, 135 feet long, with various ancient paintings in fresco, and among them the famous dog of Montargis ; but the revolution destroyed the castle and the pictures. The climate of this region, is said to have become much less salubrious, since the canal was erected. To Briare, six leagues. The country is uninviting and sterile, till we approach this town, when the beautiful valley of the Loire opens to our view. It is here, however, a narrow stream, with an unusual extent of flat sandy bottom on each side. The whole of this wide bed, is no doubt covered by the river, when the waters are raised by continual rains. At this place, the canal which joins the Seine and the Loire, opens into the latter by several locks. It was the first undertaking of the kind in France, and was worthy of the great Sully, by whom it was planned. Through Boni to Neuvi, four leagues ; and from Neuvi to Cosne, three and a half. These are towns containing from 1500 to 4000 people. Cosne is a place of considerable manufacturing industry. We arrived here about 6 P. M., and as soon as we could disengage ourselves from the crowd of females that surrounded the carriage, urging us with vehemence to buy some of the articles made in the place, which they exhibited to our notice, we went to view an anchor forge, at which the largest anchors in Europe are said to be manufactured. The superintendant, (as he appeared to be,) complied immediately with my request to see the establishment, and conducted us to several shops, containing forges, tilt-hammers, &c. and explained the manner in which the prodigiously large masses of wrought iron, which compose the body and branches of the anchors, are firmly united together, so as to form a solid and compact whole. He showed us a great number of anchors, each of which were stamped with the weight of about 5100 kilograms—11,350 lbs., or five tons nearly. My questions being rather particular, he looked at me earnestly, and remarked, "*Vous êtes Anglais sans doutes.*" "*Non, nous sommes Américains.*"* At this his countenance brightened, he expressed his surprise, and redoubled his attentions ; remarking, that he had before "had the honour of conversing with Americans." Cutlery is made here of a fine quality. Cosne is immediately on the Loire. From thence to Pouilly, three and a half leagues, and to La Charité, three leagues farther. We arrived at this last place,

* "*You are doubtless Englishmen.*" "*No, we are Americans.*"

about nine in the evening, in a shower of rain ; and found, in the large kitchen of a good inn, a cheering wood fire, which, with the shape of the fire-place, reminded us of an old fashioned New-Jersey farm house. The hostess and her domestics were very civil. They soon prepared for us two omelets, and some boiled milk ; placing, as is always customary in France, a bottle of wine on the table. At all the inns we have been at, the female is the principal manager. In almost every department of active life, they know how to direct and manage without the interference of men. I noticed, on the road to-day, a young woman driving a team, with a load of wood. The country through which we have just passed, abounds in grapes, which are now nearly ready for the vintage.

10th. We left La Charité before six. This place derives its name, it is said, from the numerous alms which were formerly distributed in it, from a convent in the neighbourhood. Its population is about 4000. After passing Pougues, we ascended toward Nevers. Here the aspect of the country changed greatly for the better. Instead of a landscape, rather sterile and uninteresting, we had before us a valley, rich in grain and fruits, with hills on each side covered with vines. Nevers is seated at the confluence of the Nièvre and Loire. It is an old town ; the streets are crooked, and the buildings, like most of those in France, have nothing of that air of neatness and comfort, to which we are accustomed at home. A new and splendid crucifix, with a group of figures, representing the women standing over the body of our Saviour, just taken from the cross, attracted our notice on entering the town. There is some appearance of commerce at this place ; and our guide informs us there are several kinds of manufactories carried on here, particularly earthen ware, glass, and enamel. Of the latter we had a convincing proof in the importunate application of a genteel woman, who, at our breakfast table, spread before us two boxes of ware of very nice workmanship, and with great insinuation, urged us to buy. There are also various operations connected with the working of iron ore, which is obtained at no great distance. Nevers has a population of 12,000. Magni, St. Pierre, Le Moutier, St. Imbert, and Villeneuve sur Allier, are stations where we changed horses. They are villages of different sizes, and all situated in a charming and fertile country. Yet at every stopping place we are accosted by

men, women, and children, uttering, in a doleful tone of voice, "*Votre charité messieurs, s'il vous plait, pour un pauvre miserable.*"* Mendicity in France is a regular profession. A gentleman in Paris informed me, that, in the course of an investigation in which he was concerned some years ago, they discovered that a certain family of medicants, which occupied an upper room in one of the obscure houses of the metropolis, had depended upon begging, *as a family resource*, for 100 years. The business had descended regularly from parents to children through several generations.

The next town which we entered was Moulins, agreeably situated on the Allier, a river which joins the Loire just below Nevers. Moulins contains 13 or 14,000 inhabitants. It is famous for its cutlery: of this the traveller is generally informed immediately on the arrival of his carriage, by a score of women, young and old, who open their boxes and ply him with the most pertinacious and dexterous intreaties to purchase their wares. Knives, scissors, razors, &c. of the most curious and delicate construction, are offered at double their value, with an intention to take what they are really worth. It being a rainy day, we had to contend with only two or three of these blackeyed suitors. The streets and houses of this town, though wider and better than those of Nevers, are crooked and inconvenient. This town is the capital of the Bourbonnais. Upon leaving it, we proceeded along the Allier, through the villages of Bessai, and Varennes, to St. Gerand, where we concluded to abide till the morning.

The country through which we have travelled to-day, more especially since we left Nevers, has been as beautiful and smiling as any part of the world I have been in. A heavy rain during the day did not prevent us from indulging in frequent terms of admiration, of the prospects of hill, valley, cultivation, fertility, and beauty, which were continually apparent. It is remarkable for the excellence of its fruit, the beauty of its women, the curious figure of their straw hats, shaped like a boat, and their wooden shoes. These clumsy, clogging shoes, are still in general use in many parts of France. They make a very unpleasant noise on the pavement and floor, but they have the recommendation of durability and cheapness. Perceiving a decent man with a better pair on than ordinary, I asked him the

* Your charity, gentlemen, if you please, for a poor miserable being.

cost; he replied ten sous, (= 10 cents.) They are also drier than shoes of leather. The females wear caps from their childhood, without discontinuance. The male peasants in this part of France, carry very broad brimmed hats, some of them, I think, two feet in diameter. They appear to be a civil, polite people. Great quantities of nuts, of the kind we call English walnuts, are cultivated here. The tree (*Juglans Regia*) is ornamental as well as useful.

Much of this day's ride has reminded us of America, from the width of the road, the general features of the country, and the better style of farming which prevails. Oxen are used in ploughing. I observed three pair attached to one plough, where the soil was such that, in New-Jersey, two horses would be considered as an ample team. The oxen draw by the head and not by the shoulders. A mat of straw is placed on the forehead, and a band of leather or cordage is put over it and made fast round the horns to the yoke, which rests on the neck. This yoke is fastened to a pole or tongue, chains not being used. Upon our arrival at St. Gerand, we were recommended to the *Maison de Poste*, as the best inn. An active and polite little landlady displayed her rooms with brick floors, her beds, and her *salle à manger*, assuring us, we should be "*bien content*" with her fare. Some pigeons that were on the spit, and a fine rabbit that the "*bon homme*" was skinning, so quickened our appetites, that we determined upon having a good supper, before we had stipulated for the price.

11th. After a breakfast on genuine French coffee, which is always good, and paying a bill of thirty-five francs, from which, enormous as it was, there was no appeal, we pursued our journey through the post towns of Palisse, a considerable village, with an old chateau; Droiturier, a poor place; St. Martin d'Estreaux; Pacaudierre, and St. Germain l'Espinasse. None of these are places of much importance. The same general want of neatness and attention to external appearance, which prevails in the northwest of France, is found here. The country becomes more hilly as we advance. At the last mentioned town, hills appeared that deserve the name of mountains; and before we entered Roanne, our next post, the lofty summit of the Puy de Dome, covered with snow, made a magnificent appearance in the southwestern horizon. Roanne is one of the finest towns we have seen since leaving Fontainebleau. It has a population of 13,000, and is charmingly seated on the

Loire, near the head of its navigation. A vast number of boats were stationed in the river, all without sails, and of a peculiar construction. Many of these are employed in transporting pit coal from mines situated higher up. The market was full as we rode through; but many more women than men are to be seen on all such occasions. Among the objects to which our attention is sometimes drawn, as we ride through these country towns, are large shoe stores, in which a piece of leather could now be found. These *sabots* are in general demand:

The female peasants in this part of the country, have a mode of spinning which enables them to perform the operation as they walk the streets and roads. The distaff, having a long handle, is held under the left arm. The spool terminates at one end in an iron pin, pointed and made rough, so that, with the thumb and finger of the right hand, a rapid twirl is easily given to it, which draws out and twists the thread; the spool hanging loose as it runs round. The thread is then wound up, and another twirl is given in the same way. They spin hemp, in this manner, with facility, as they watch their goats, sheep, or cows, grazing in the fields.

Leaving Roanne, the country becomes mountainous. We changed horses at St. Simphorien, and immediately began to ascend Mount Tarare. This mountain has been celebrated by Sterne, in his account of the horse-shoe and the peasant's family. It has an elevation of 22 or 2500 feet above the sea. We crossed it about four o'clock P. M., in as fine an afternoon as the summer has produced. The perspective on all sides, was delightful; cultivation every where smoothing the rugged features of nature. The snows of Puy de Dome were visible at a distance, while the valleys under our feet were clothed in a lively verdure. The air was remarkably clear; and towns, villages, farm houses, and chateaux, gave animation to the scenery. The descent of this mountain is rapid, but the road is remarkably good. The waters which flow into the Loire and its tributary streams, are here divided from those which empty into the Soane; thus separating the Atlantic from the Mediterranean currents. At the foot of the mountain, is the town of Tarare; where we had concluded to seek quarters for the night. This town is in a situation the most unfavourable to the ordinary means of human support—in a narrow valley, a barren soil, and remote from any navigable stream. It is a place in which one could at best suppose there would

be but a few indifferent huts, and a bad tavern ; but it has acquired, within a few years, a population of about 3000, and contains some of the best houses we have seen (chateaux excepted) since leaving Paris. This prosperity is owing to the introduction of manufactories, principally those of cotton weaving, and of calico printing. The brook which moves the machinery sometimes becomes a formidable torrent ; but such has been the extraordinary drought of the present summer, the stream has not only been entirely dried up, but they have been obliged to send their cattle to a great distance to water. This, they say, has been the case for three months, until the copious rain of yesterday gave them relief.

From the experience of last night, we thought it best, this evening, to make a bargain with the landlady for our accommodation ; and after looking at the rooms and finding them tolerably good, I asked the price. This she declined to state, saying we might give what we pleased. To this I objected, and left her to make farther inquiry ; but while I was gone, she offered the rooms to our servant at a reasonable price, and not being more successful in my bargain at the next inn, we accepted the terms offered. This trait in the French customs, is one of the most unpleasant which a traveller has to encounter. They appear to think that all the money they can get for an article is fairly acquired, and will often ask double or treble the sum, at which they will afterward offer it. Without a previous bargain, one is scarcely ever exempt from such a liability to imposition ; and yet nothing appears more remote from their intention than to cheat. They are scrupulous with respect to the money given in change, and would scorn to take advantage of any mistake in the calculation. With respect to the principle of honesty, or rather of its opposite, dishonesty, it is questionable whether property is any where more safe, or a traveller less in danger of thieves, than among the French.

12th. After breakfast, and paying a bill comparatively moderate, we left Tarare in a delightful morning, and disengaging ourselves by degrees from the narrow valley, the country opened into an expanded landscape, embracing several large chateaux of more modern structure than those nearer Paris. The recent rain has set the ploughs again at work. I observed that, in several instances, the furrow was turned to the left, instead of the right, as it always is. I believe, in America, excepting, perhaps, among some of our

foreign settlers. Passing through Bully, we arrived at Arbrèlle, where we suffered our carriage to go on to the next post, and hired a carriage to conduct us to the copper mine of Chessy, about a league to the north of the road. Although it was the inn-keeper himself who was to drive us, and with his own horses, it was his wife with whom the bargain was to be made. With her husband at her elbow, she decided upon the price, and off we started in a most singular kind of vehicle, the seats of which would serve for a bed or couch if placed in a chamber, but which so filled the carriage, as to render it extremely awkward. Arrived at the mine, we found the works were stopped for want of water. The shafts extend about 250 feet in perpendicular depth. The ore appeared to be principally pyrites, with the green and blue carbonate. The latter variety is a very fine and rather a rare mineral. This copper is found in a rock composed of quartz, and a talcy steatite. The operations of the mine are conducted by horses, steam not being used. The bellows of the foundry are of wood, the lower part sliding into the upper. This mine is very small compared with those in Cornwall.

We resumed our carriage at La Tour, a village three and a half leagues from Lyons. The country increased in interest as we approached this ancient capital of the south. It is considered as one of the most delightful regions of France. The *maisons de campagne* are so numerous, as to appear like villages scattered upon the hills.

The dome des Chartreux of Lyons, announces the position of the city between the Soane and the Rhone, neither of which is crossed by the road we have travelled. The remains of a Roman aqueduct claimed our attention; one portion of it being in a valley, and another on a hill. They are doubtless the oldest specimens of masonry, which our eyes have ever beheld. The Soane is a stream, quite as considerable at Lyons, as the Seine at Paris. We crossed it on one of the seven bridges, which connect its opposite banks within the town, and took up our quarters at the Hotel de l'Europe, in rooms which overlook the river, immediately in front of the heights on the opposite side; upon which is a number of large buildings, gardens, shrubbery, &c.

We repaired to a restaurateur for our dinner, and were well served, for two and a half francs each, including a bottle of *vin ordinaire*, which we found very good, though it

was marked on the carte at only one franc. It is cheaper, of course, than bottled cider in America. In the evening we had a delightful walk on the banks of the Rhone. The full moon shone with brilliant effulgence on the water, as it flowed with majestic rapidity through the arches of the bridge, upon which we placed ourselves, to enjoy the scenery. The Rhone is by far the most noble river I have seen in Europe. It inspired me with the most pleasing recollections, from its resemblance to the streams of my native land. We returned along a fine quai, upon its borders, lined with boats, which convey to the city coal, wood, salt, and other commodities.

13th. Seated at my *escritoire*, to note the particulars of yesterday, a singular sound from a person in the street, drew me to the window. It was a juggler, attracting a crowd around him, in order to exhibit his tricks, and to collect the sous they might have to spare. He succeeded in gaining a large audience of both sexes, who, passing *par hazard*, formed a ring round him, and laughed heartily at his *legerdemain*. Thus began the first day of the week, in this part of the town. We breakfasted well at a *café*, for less than one and a half francs, and had the newspapers in the bargain. The one I took hold of was a *Paris Moniteur*, containing an account of the promised relinquishment of Pensacola by our government—a piece of intelligence that could not but gratify our feelings, from the persuasion that it was an act of moral justice, that would do much for the credit of our government. Upon our return, the necromancer in the street had given place to a company of fiddlers.

Bosquet, a merchant and banker, of some eminence in Lyons, to whom we had letters, called to see us, and offered his services, with the ease and politeness of a true gentleman. Having accepted his invitation to dinner the next day, we engaged a conductor, a modest and intelligent Swiss, and commenced a little survey of the town. The museum was opened to us. It consists chiefly of Roman and Egyptian antiquities, and paintings. The former are very considerable, a great portion of them having been found in the town and neighbourhood of Lyons. The paintings are numerous, and some of them large and fine. In this collection are the celebrated bronze tablets, discovered in 1758, containing the harangue, which the Emperor Claudius made in favour of Lyons. These curious

and interesting monuments of antiquity were dug out of a hill near the town, and are still in good condition, the inscription being quite legible. We were shown the apartments of the school of drawing; an institution which appears to be conducted with great spirit and science. In passing through the hotel du ville, or city hall, two very large bronze statues, emblematic of the two rivers which bathe the town, are presented to our notice. They are fine specimens of this kind of workmanship. This hotel fronts the Place de Terreaux, which was deluged with the blood of the citizens, after the surrender of the city to the revolutionary army, about the year 1794.

We crossed the Soane, and went to the top of Les Fourvieres, where there is a church, called Notre-Dame des Fourvieres. The people were assembled in it at the time of our arrival. This church remained shut during the whole of the revolution, and was not opened until the late return of the present pope from France. In passing through Lyons, he performed a pilgrimage, as his devoted followers have termed it, to the top of mount Fourvieres, in company with the archbishop, and reopened this church. He was followed by an immense multitude of people; and after the ceremony, the poor old father was carried down in a chair, by two priests, to the Hospital Antiquailles, followed by the acclamations of the crowd; and when he descended, his faithful adherents eagerly endeavoured to kiss the ground where his feet had been placed. It would seem therefore, notwithstanding the very unceremonious style in which his holiness had been treated by the great emperor, that he had lost nothing of his sanctity in the opinion of the greater number of the Lyonnaise.

When the ceremonies were over, we found no difficulty in gaining admittance to the interior of Notre-Dame des Fourvieres. It is a very plain building. We ascended to the steeple, and enjoyed a perspective of greater extent than any I had ever before beheld. The city of Lyons, the two rivers, and the country bordering the town, lay at our feet. The abrupt mountains of Dauphiny appeared in the southeast, and farther north the Alps reared their majestic heads. Mount Blanc, though at the distance of sixty miles, often presents its snowy peaks. Our guide said he distinctly saw it, though the evidence to me was not so clear. When the atmosphere is such as to afford a distinct view of it, rain, it is said, may be expected.

There are other places of worship of considerable note on this side of the Soane. One of them is the chapel of St. Just, respecting which a curious story is related, and by no means creditable to the early inhabitants of this city. A madman, having committed a great many disorders in the city, ascended the Fourvieres, and sought refuge in this chapel. The enraged citizens followed him, demanded that he should be given up, and threatened, in case of refusal, to reduce the church to ashes. St. Just, who was at that time Bishop of Lyons, was deaf to their entreaties, until the principal persons among the pursuers had bound themselves in a solemn manner, that when they had obtained the criminal, they would only put him in irons. Utterly regardless of this promise, as soon as they had the man in their possession, they tore him in pieces, before the eyes of the bishop. St. Just, accusing himself of rashness, deliberately condemned himself to a state of penitence in the deserts of Egypt. His people endeavoured in vain to bring him back to his church. He died in his retreat, and his body was brought to Lyons in great pomp, and placed in this church, which was afterward dedicated to the canonized bishop.

The gardens rise one above another, on the Fourvieres, as so many terraces in the air. In one of them we plucked some of the most delicious grapes we had ever tasted, and ate of them till we were cloyed; our guide paying to the owner, only a few sous for the privilege. Upon the same eminence is a hospital for the insane, in a building which was formerly a convent. This building stands on the site, where was once a palace of the Roman emperors, and in which the Emperor Claudius was born, and Caligula, his predecessor, had lived. It is now called L'Hôpital Antiquailles, in consequence of the numerous antiquities, that have been, and are still found in that quarter. Into this hospital, we gained admission, and were shown the apartments and cells of the insane. The treatment of them appeared to be mild; the accommodations, though coarse, were tolerable; and if beauty of prospect or position, can contribute to the relief of mental disorder, this asylum must possess a very eminent advantage. In the insane departments, were about 60 men, and more women. The national character is by no means obliterated by derangement. The first thing we saw on entering, was one of the male patients, playing on the fiddle to another, who was dancing merrily

before him, in obedience to the music. But, to the discredit of the supporters of this institution, the building is made subservient to another purpose, which must have a direct tendency to retard the recovery of lunatic patients. It is a place of confinement for disorderly and diseased females. They have possession of the upper rooms, which look immediately into the yard of those whose mental malady is, or ought to be, the subject of moral treatment. The funds of this institution, are insufficient to maintain it in the desired order, and it is on this account, probably, that the building is appropriated to such incongruous uses.

In descending the Fourvieres, we went into the Cathedral, or Metropolitan Church of St. John. This is an ancient building, the architecture of which is in the Moorish style. It is not very large, nor is its interior half so impressive as the church at Rouen, and many others. It contains one of the two very curious and ingenious clocks, made by Lipsius, of Basle, in 1598, and described in Hutton's mathematical recreations, and by other writers.

14th. The first salutation from the street this morning, were the sounds of a hymn, from a number of voices in chorus. It was a procession,—first of men, headed by priests in their robes, walking in two rows, at some distance from each other, and bearing a large silken banner, or flag: then of females, all drest in white, with a white veil over their heads, the foremost bearing a crucifix of ivory, encircled with festoons, from which several cords were extended, and held by those who led the band. Every female, in the procession, carried an open book, and joined in the chant. After these followed a great number of other females, habited in their usual style, and then a corps of men formed the rear of this march, quite new to us, but I suppose very common in Catholic towns. Our guide informed us there were not more than four hundred Protestants in Lyons, and but one place of Protestant worship. The external observances of the Catholic church, appear to be admirably calculated to hold the common mind in subjection to its dogmata; a subjection, which I have no doubt, however, is often seasoned with sincere devotion. But how deeply is it to be regretted, that this devotion is so often intimately connected with superstition; and that, in consequence of this, so many of those who have intelligence enough to perceive this connection, run into the opposite extreme, of cold hearted infidelity.

We went, after breakfast, to see a manufactory of silk stuffs, or tissue. It would be difficult to form an idea of the richness and splendour of this stuff, without seeing specimens of it. Gold and silver thread, and silk of all colours, are woven into any form or figure, which an artist may be pleased to designate. Flowers, birds, animals, and men, are thus represented by the operations of the loom, as effectually as by embroidery, and with all the brilliancy of the dyer's art, and all the luxury of gold and silver. Some of these stuffs are made, (as we were informed by one of the principal dealers and capitalists,) expressly for the Grand Seignior, and court of Constantinople. Those destined for the cushions and hangings of the French palaces, are less costly and gaudy, and more conformable to modern European taste. The mechanism of the loom, by which this tissue is made, resembles, very closely, that used in the weaving of figured carpets, alluded to at page 132, but requiring greater nicety of management, and much more time to accomplish a given length. The workmen at the loom informed us, that an ell was the labour of three or four days. Ribands are woven with the same richness, and variety of figure. The gold and silver thread, we had also an opportunity of seeing manufactured. The gold thread is only gilded silver. It is drawn to the requisite degree of fineness, by passing the wire between two exquisitely polished steel rollers, pressed together by weights. The metallic and the silk thread are then twisted together, by a kind of jenny, but in such a way, as to wrap the metal effectually round the silk.

We embraced the invitation, given us by the woman in the cathedral yesterday, to visit the clock again, and to see its movements. It was wound up for the purpose, and performed most or all of the operations, mentioned in the description that has been given of it. It is in the form of a square tower, terminated by a dome, above which is an artificial cock. When the clock was wound up, the cock, (as large as a half grown chicken,) fluttered its wings, and crowed twice or thrice; a dove descended from the clouds; an angel appeared to Joseph as an emblem of the annunciation of the virgin; other angels appeared, and, by striking bells, produced something like the sound of a hymn. On a little balcony, which crowns the dome, is a figure of a guard, or porter, who, as soon as the chime begins, marches slowly toward the bell, raises his hammer, and

strikes the hour, turning his head round at each stroke ; then, moving round the dome, repairs to his post, where he remains till the next hour. On different dial plates, various astronomical events are represented, such as the diurnal progress of the sun and moon, the days of the year, with the civil and ecclesiastical calendar. One of the dial plates, which indicates the hours and minutes, is of an oval or elliptical form, and the hand or index which moves round the centre of the ellipse, lengthens or contracts itself, as it revolves, according to the varying semi-diameter of the ellipse. This was certainly a most extraordinary piece of mechanism for that period. It was repaired in the last century by Nourisson, a very ingenious workman of this city. At present, however, it might be executed in a different and very superior style.

The woman took us into a private apartment, opened a drawer, and showed us the vestments worn by the priests on special occasions. They are as gaudy and splendid, as the richest gold and silver embroidery can make them. How much more of the Mosaic ritual and of the Levitical spirit, is there in all this, than of that dispensation they profess to follow, whose Author was clothed in a garment without a seam!

We dined to-day with Bosquet. The dinner was in the true French manner, and certainly very excellent. Variety was its distinguishing feature. The fruit was uncommonly fine. His wife appears to be a pleasant and interesting lady. Seated between her and her mother, my French faculties were put to the test ; but how well I acquitted myself, it would be difficult, through the veil of French politeness, to discover. There were several gentlemen at the table, and among them, le grand père, father of our host, a remarkably agreeable and venerable looking gentleman. After leaving the table, we were conducted into another room, where coffee and liqueurs were immediately served.

Leaving this agreeable family, we walked about a mile and a half to witness the confluence of the Rhone and Soane. The promenade is a delightful one, along the margin of the Rhone, between two extended rows of Lombardy poplars. The rapidity and depth of the river, afford the means of erecting mills upon it to any desirable extent. This is done by anchoring to the shore at a distance of twenty or thirty feet, by heavy chains, two large boats placed abreast, with a large water wheel adjusted between them. The body of the mill rests on one or both the boats. They have a near

resemblance to our steam ferry-boats. Flour and fulling mills, are thus constructed, in sufficient numbers, in the immediate vicinity of the town. The current, always in one direction, is so rapid as to turn the wheels with facility.

The view which we obtained from the bridge which crosses the Soane near the junction of the two rivers, is exceedingly fine. A village on each side, and a populous country on the east of the Rhone, with the bold shore of the Soane, capped with large buildings and gardens, delight the eye by their variety and picturesque beauty. We returned in a carriage crowded with citizens, but mostly females, and paid four sous each for our ride.

15th. The streets of Lyons are very narrow, paved mostly with pebbles, and without footwalks. The houses are built of stone, and generally five or six stories high. Hence the light of the sun in some of the streets, (lat. nearly 46° N.) must be a delicacy during six months of the year. The shops make but little display. It is considered, nevertheless, as the richest commercial town in France, next to the great metropolis. The population, in 1806, was less than 90,000, and it has not, I should presume, varied much since. The most considerable houses here, as well as in Paris, are built with a hollow square or opening in the centre, which is common to all the mansions around it. One or more large stone staircases open into this court, which are also common to a number of families, who occupy different apartments and different stories, in the building. A large heavy gate, closes the court of these houses from the street. At this the visiter gives a lusty knock, the gate is opened by the porter, who directs him to the story and the door of the inhabitant whom he seeks.

I went to see a piece of ancient mosaic, recently discovered, and considered as one of the most interesting relics of this kind in existence. It is carefully preserved, by having a coarse wooden house erected over it. I should judge it to be about fifteen feet square. It represents the sports of the circus, with the judge seated at one end, in the attitude of deciding the prize among the different competitors. It has suffered some injury, but still exhibits, with great distinctness and beauty, the taste of the remote age in which it was executed, and the skill and labour employed in that species of work.

Agreeably to the invitation of Bosquet, le grand père, who is one of the administrators of the institution, we visited

"La Charité," the public establishment of the city for assisting the poor. It is a very extensive concern. In one room there are 250 beds appropriated to females, each bed having an *armoire*, or clothes-press, appertaining to it. The bedsteads are all of iron. Each of the occupants appeared to have some employment, chiefly spinning and knitting. Another room of rather less size, is appropriated to men.

This institution has three distinct departments. A hospital for the aged and indigent poor, a foundling hospital, and a *maternité* or lying-in hospital. About 400 aged people find in this hospital an asylum during the rest of their lives. None can be entered in the books for admission to this department who are not seventy years of age. Their situation and claims to the charity, are carefully inquired into, before the question is taken on their admission. When four vacancies are to be filled, a preference is given, first to the three "septuagenaires" who have been longest on the list of applicants, and secondly the fourth is chosen from the "octogenaires" that have been at least three months in nomination. These old people are dressed in a uniform, and have the privilege of going into town once a week, but they are forbidden to be on pain of expulsion.

The whole of this large establishment appeared to be admirably conducted. The infantile department was the first of the kind I had yet seen, for in the United States we have nothing of this description. In one room were twenty cradles, for the use of these little outcasts from the warmth and tenderness of parental affection. The cradles were suspended in rows, on a frame, of a height sufficient to make them easy to manage. Children are received at the earliest period of infancy, put out to nurse in the country, returned when old enough to derive benefit from instruction, taught in the school of the establishment, put out to trades, and kept under the notice of the administration until their apprenticeship expires. The children dine separately from the old people. We observed a train of them marching from table, and singing in chorus, as they passed from one part of the building to another. They were returning thanks, as our venerable and polite attendant informed us, for the meal they had just partaken of.

They showed me the list of children received since the commencement of the present year. It amounted to 1007! Can a more decisive proof be wanting of the ultimate tendency of such an institution? They remain generally but

a few days in the house, the application for children being commensurate with the demand for nurses. They are baptized, named, and sent abroad. One of the sisters who attends to this department, has stood godmother for many thousands. This very extensive establishment is supported chiefly by voluntary contributions and legacies.

Whether the eventual tendency of such an establishment as this, be to diminish or to increase the sum total of human happiness, there can be no doubt, that the administration of it, affords the most sincere gratification to the benevolent minds of those who are actively concerned in it, and annually preserves from untimely death, hundreds of human lives. This very extensive institution took its rise in the year 1531, when the country was afflicted with a grievous famine. Thousands resorted to the city of Lyons from the adjacent districts, and after being sustained by the generous exertions of the citizens, until the return of a new harvest, the surplus of the fund raised for their relief was appropriated to the foundation of this charity. The buildings are large and finely situated, between the place Bellecour and the Rhone.

* We next visited the general hospital of the city, which is considered as the best in France and perhaps in Europe. On application to the porter, we were directed to one of the matrons who have the general charge of the establishment, and on informing her who we were, and what was our object, a guide was immediately assigned us,—a man thoroughly versed in all the details of the house. After passing through and examining the various apartments, we could not but acknowledge that it deserves the reputation it has acquired. To this hospital, as well as to one in Paris, the French have given the appellation of *Hotel Dieu*. The practice of familiarizing the sacred name with worldly objects, as in this instance, is, as I conceive, extremely reprehensible ; and still more so is the frequent—I might say perpetual—and almost universal habit of introducing it in the way of ejaculation, on the most trivial, as well as important occasions. I am aware that, as it is thus employed by many persons, it is by no means designed to express irreverent feelings ; for I have often heard the term, *Ah mon Dieu !* from the lips of persons whom I sincerely believe to be of a religious and pious turn of mind. Still I think it impossible that the habitual introduction of a term, which is meant to apply exclusively to the Supreme Being, into common and trivial conversation,

can be unattended with a diminution of reverence for that best and most sacred of all the objects of our contemplation ; and that, of course, such a practice, when it becomes general or national, must tend to lower the moral tone of the people.

The situation of this Hospital, as well as that of *La Charité*, is remarkably fine. It fronts the Rhone, with a noble façade, while its majestic dome gives it an air of architectural magnificence, not often surpassed in buildings of this nature. It is singular, however, that there is no admission into this building by any door or opening in front. The entrance is in the rear, and by an unpleasant and awkward passage.

At the time of my visit, the hospital contained about 1200 patients. Last year there were 1400 ; but, notwithstanding this great number, the building is not crowded. Each patient has a bed to himself, the wards are large and airy, and kept in very commendable neatness. The whole organization and management appeared to me to be admirable—exceeding any thing of the kind that has yet been adopted in our country. It is however an organization *à la Catholique*. A priest is regarded as an indispensable part of the economy of the house, and the daily celebration of mass as an important part of the duties due to the patients. Hence there are two altars in the house, the principal of which is in the chapel. It is ornamented with a costliness and splendour that astonished me, and which ill accord, either with that regard to economy, which is inseparable from the wise administration of charity, or with the simplicity of that faith which cheers the dying Christian. It is decorated with sculpture, and mosaic, and verd antique, with a sumptuousness and vanity, that would better befit the chapel of a palace, than the altar of a house for the sick, supported by public bounty. But in a religion which consists so much in display, it is considered as a work of great merit, to adorn, with costly materials and elaborate workmanship, those places where men are to kneel and confess their sins, to render homage to the Creator, and to be forcibly reminded of the emptiness of worldly things ! Accordingly, on a stone near the altar, there is the following inscription :

Cet autel est un nouvel hommage
De la piété et de la bienfaisance
De nos concitoyens.*
1808.

Four of the largest rooms, or wards of the patients, have, taken together, the form of a cross : two of the wings are

* This altar is a new homage of the piety and beneficence of our fellow-citizens. 1808.

appropriated to women, and two to men ; the whole being easily inspected by a person in the centre. They are lighted by a central dome ; beneath which is a small altar, at which mass is said for the benefit of the patients in all the wings, most of whom can see the movements of the priest, and hear the service, as they lie in bed ; and cross themselves, and unite with the ceremony, as they may feel inclined.

It was here that I witnessed, for the first time, the excellent effects of that extraordinary band of females, denominated, in France, "*Sœurs de la Charité*." This is a distinct sisterhood, or religious order of females, whose whole business is to relieve the distresses of their fellow-creatures. To this they devote their lives. It is doubtless the unwearied activity of this truly benevolent sisterhood, which gives to the hospitals of France, a superiority over most others in the world. Their fidelity, their patience, intelligence, neatness, skill ; and above all, their tenderness and sympathy with human affliction, qualify them, in an eminent degree, to discharge the various duties of hospital attendants, with superior effect. Surely, if there is true religion to be found in the country, it exists in its brightest form, in this amiable sisterhood. What but a pervading sense of the nature of Christian obligation, can induce a young and accomplished female, to abandon the various pleasures of fashionable life, and devote herself to a service, which, in its nature, can have nothing to recommend it but the inward consolation of doing good ? They are found in all the hospitals of France, performing the duties of nurses, chamber-maids, and cooks. Some of the elder sisters fill the higher and more elevated office of apothecaries. I was surprised to find the "*pharmacie*" of this great hospital, entirely in the keeping and management of the sisters : and its appearance bears testimony to their skill and neatness of arrangement. The apartment is large, and not only supplies the house with medicine, but serves also as a dispensary to the out-door poor. The hospital contains, besides, a large laboratory, well supplied with furnaces, stills, and all other requisites for the preparation of medicine in a large way. The administration of this extensive concern, is under the direction of a council composed of the archbishop, the prefect of the department, the mayor of the city, and twenty citizens, appointed by the minister of the interior, at the suggestion of the council. Four or five of these are renewed every year. There are attached to the house, a

priest, (or "maitre spirituel," as he is called;) four almoners; eight physicians, and six assistants; a surgeon-major, a surgeon's mate, and eleven assistants; a steward; eighty-one sisters, and seventy-three candidates; thirty-six brothers, (*frères hospitaliers*,) and thirty-six candidates. The bedsteads in this hospital are of iron; with tops, to which curtains are appended. A shelf rests on supports in the frame immediately over the patient's head; on which his medicine and food are placed within his reach. This important addition to the cleanliness and comfort of the sick, was effected by a special subscription, in 1787; and was encouraged by the example of the king, Louis XVI. This noble institution receives considerable support from government, but it depends very much upon legacies and private donations. I have been more particular in this account of it, as it is the first institution of the kind I have visited on the continent; and is regarded as inferior to few, if any, in Europe, for the perfection of its administration.

There are several private associations in Lyons, for the relief of the poor. Madame Bosquet told me she was a member of a large society of females, whose labours were very important in finding good places for children, assisting servants, &c. A school for mutual instruction has been commenced, and is now flourishing; but it was the time of vacation, and I did not see it.

The college of Lyons, which bears the name of La Trinité, like all the principal establishments of the city, suffered extremely during the revolution. The chapel was pillaged and mutilated; the pulpit torn down; the observatory destroyed; and the paintings in fresco, which ornamented the class rooms, entirely obliterated. But what still more strongly marked the violence of these modern Saracens, was, that the noble library, enriched by the gifts of successive kings, and other valuable donations, and filling a room one hundred and fifty feet long; thirty-three wide, and forty high, was despoiled of the treasure of ages. Many of the books and manuscripts, if we were correctly informed, were employed by those reformers of the government, as fuel, in cooking their victuals. These devastations have, since the revolution, been repaired to a great extent, and it is now estimated to contain 120,000 volumes. This library is situated on the quay of the Rhone, with a balcony extending along its front, and opening into the room. The entrance, however, to this famous store of learning,

is in the rear, through a single door, in one corner of the room, narrow, obscure, and difficult of access. I know not the reason for such a perversion of taste and convenience. The busts of the Abbey Raynal and of Voltaire, and an old pair of globes, about six feet in diameter, are the only ornaments which the revolutionary enthusiasts allowed to remain; and none have since been added.

I could not leave Lyons without feelings of respect for the public spirit of the citizens, and of solemn pleasure in having seen a place, the history of which contains so much that is tragically interesting. It is a very ancient city, being founded, according to the best accounts, about forty years before the Christian era.

The aqueducts, whose ruins I have noticed, are ascribed to Marc Antony. From a learned and very interesting account of them, read before the Academy of Lyons, by M. Delorme, it is evident, that these aqueducts ought to be ranked among the most distinguished efforts of Roman skill and enterprise, in this kind of engineering. The object was to introduce a plentiful supply of water to the top of the Fourvieres, an elevation of many hundred feet above the level of the Soane, where the palace, baths, and fountains of the emperor were situated. For this purpose, they were obliged to seek for springs on ground still more elevated. These were found in sufficient abundance, only at the distance of twenty or thirty miles, where, on the tops of mountains, they collected the waters of the Geis and the Janon, tributary streams of the Loire. Hence the principal aqueduct had a great number of branches, extending to different mountains. The elevation of the main sources is computed to be 360 feet above the Fourvieres. A gradual and regular slope was given to the principal canal, throughout the whole distance, and to effect this, they were obliged to conduct it along the sides of the valleys, pursuing their various sinuosities, and frequently crossing them on bridges or arcades, piled one above another. When the depth of the valley was so great, as to render the labour and expense of a bridge too formidable, the aqueduct was continued along the slope, until a more convenient place for crossing presented itself. But, in some instances, they were obliged to convey the waters over valleys too profound to admit of the construction of a continued level of masonry. In these cases they resorted to the use of leaden tubes. The aqueduct of stone terminated

in a large and substantial reservoir on each side of the gulf, and these reservoirs were connected by numerous large leaden tubes, which, having their extremities inserted in opposite reservoirs, descended toward the bottom of the valley, and were supported throughout their length, either by the sides of the hill, or by solid walls. The length of the principal aqueduct, (for there were evidently several which brought water to the city,) comprehending its windings, is estimated at thirteen leagues, or about forty English miles. The trench, or canal, was dug five feet wide, and about ten feet deep, with a regular depression of one foot (French) in 100 toises. The walls contracted this space to a channel for the water, of two Roman feet in width and four and a half in depth. The floor was covered with cement, six inches in thickness, and the walls, an inch and a half. The arch was not cemented. The angles of the floor were filled with cement. The perfection and durability of this great aqueduct is ascribed by Delorme, to the use of small fragments only of stone, from three to six inches thick, in the formation of the walls, rejecting pieces of larger size. This facilitates the consolidation of the wall by a more intimate junction of the stone and the mortar. The strength of the mortar, on which much also depends, was increased by the use of coarse sand from the mountain streams, which is considered as incomparably better than fine river sand. When they were obliged to use the latter, they mingled with it pounded bricks. Delorme is of opinion, that the Roman mortar was composed of the best quick lime and coarse sand, in the proportion of one-third of the former, and two thirds of the latter. The cement which covered the walls inside, was composed of pulverized bricks, containing portions as large as peas, and even (in the finish of the floor) as large as walnuts or small eggs. It consisted entirely of lime, newly slaked, and pounded bricks, excepting, as Delorme supposes, that the mixture might have been completed by pouring on wine or vinegar. It is obvious, that the composition of these Roman walls was, in some important particulars, very different from that at present employed, for they have resisted the shocks of nearly nineteen centuries, and are still sound, even in places where they have ever been exposed to the weather.

In the reign of Claudius, Lyons was destroyed by a dreadful conflagration.

"Una nox interfuit inter maximam urbem et nullam."

It was rebuilt by Nero, and became the residence of a great number of Christians, 19,000 of whom, under the reign of Septimus Severus, were inhumanly slaughtered.

This city, in the stormy period of the French revolution, remained faithful to the king, and suffered heavily under a siege, which it maintained for a long time against the republican army. When reduced to capitulation, dreadful indeed was the rage of those pretended friends of liberty and the rights of man. The blood of its citizens streamed from the horrid axe in the Place de Terreaux ; and, as if its operations were too slow for the vengeance of the conquerors, hundreds were arranged before the mouths of cannon, and swept from existence, on the heights beyond the Rhone. Bonaparte took pains to efface the recollection of these disastrous events, by rebuilding the houses that had been destroyed, and adding many spacious edifices, which greatly ornament and beautify the city ; insomuch, that his name is popular in Lyons. The person who conducted us over one of the institutions, in referring to his expulsion, asserted, that nothing had gone right since that period, and that even the *seasons* and *weather* had evidently changed for the worse !

Our road extended along the Rhone, for a considerable distance, after leaving the city. The sky was very serene, and the atmosphere so clear, that the snowy summit of Mount Blanc, and much of its ridge, were distinctly in view. Miribel, Mont Luel, Merimeux, and Bublanne, were post towns, through which we passed, changing horses at each place. The road, after leaving the Rhone, extends along the Ain, a considerable stream, which forms a branch of the Rhone. At Pont d'Ain, we crossed the latter on a handsome stone bridge, and almost immediately after, entered one of the vallies of Mount Jura. The moon shone brightly, and we concluded to avail ourselves of so favourable an evening to advance in our journey. The road lay between mountains, which reared their heads to a greater elevation than any we had yet encountered. We passed through Cerdon, and Maillac, and about half past one in the morning arrived at Nantua, where a tolerable inn gave us accommodations during the remainder of the night.

16th. The town of Nantua contains about 4000 inhabitants. Its situation in the bosom of some of the highest elevations of the Jura, renders it sublimely picturesque. The mountains are extremely wild and irregular in this passage,

rising with an almost perpendicular abruptness over the town, to an astonishing height, and frowning upon it, with a physiognomy terrifying to one not accustomed to features of such an alpine character.

Before our departure this morning, our luggage was examined by the officers on this station. They came into the inn yard, to save us the inconvenience of transporting our trunks to the gate, and seemed disposed to give us as little trouble as possible. I entered into conversation with one of the most respectable of them, and questioned him with regard to the feelings of the people of that district, in relation to the ex-emperor. Finding that I was an American, and that he would run no risque in avowing his opinions, he candidly acknowledged that the affections of the people were decidedly in favour of Napoleon. So common was this feeling among the lower classes, they were unwilling to believe that the emperor had actually been transported to St. Helena. They thought it more probable, that he was concealed either in England or France; and might be ready, at a suitable juncture, again to make his appearance on the theatre of action and contend for his empire. The officer himself partook of this opinion, and seriously asked me, where I thought it was, that the emperor was actually concealed. On my assuring him, that there was not the least doubt of his being in reality, where public report had placed him, he appeared surprized, and was evidently unwilling to believe it.

We left Nantua about half past eight, and began immediately to ascend the mountain. The road over which we travelled, made with great labour and expense, extended for miles along a precipice, with a prodigious gulf on one side and an almost perpendicular wall on the other. At Bellegarde we stopped to view "La perte du Rhone," or the spot where the waters of this river entirely disappear, by a subterranean passage. It is no more than a great sluice of rocks formed by nature, in a rapid stream. The river is confined in a narrow channel, and must be very deep. The rock which conceals the water, lies much lower than the surface of the ground, and when the river is full, the water overflows it, and conceals the bed of the river for about sixty paces. This shelf has doubtless been formed by the fall of rocks from the adjoining mountains. We were apprised of our approach to this spot long before we reached it, by a boy who came running to us without a hat, and

offering himself as a guide. We engaged him, but upon our alighting, the poor boy was joined by a dozen other people, some of them women, with children in their arms, and all insisting, in spite of our remonstrances, to show us the way to "La perte du Rhone," and help us up and down the hills. On resuming our carriage when the show was over, we were obliged to give them all, at least a sous apiece to appease their clamour. Having descended the mountain, the country became level; and as we approached the borders of Switzerland, the appearance of the houses and farms changed materially for the better. The fields were enclosed with hedges, and the habitations and the people had an air of greater comfort. There is no natural division between the canton of Geneva and the French territory.

We crossed the line about four miles from the town. It had the appearance, on our approach, of an ancient place, as it really is; the houses are mostly of stone, but discoloured by time. We drove to the "balances d'or," and obtained lodging rooms in the fourth story. Geneva has been so full of strangers for some time, that several persons have found it difficult to procure accommodations. In the course of our journey from Lyons, we have noticed for the first time in Europe, the cultivation of Indian Corn. They call it *Blé de Turquis*, or Turkey wheat. It is however, a very meagre crop in this part of the world. With the top cut off, as we generally saw it, the stalks are about a foot high, and bear each one small ear.

17th. On calling this morning to deliver my letters of introduction, I found but one person, out of six or seven, at home. This was Dr. Berger, who offered his services with great politeness. At Professor Pictet's I was informed he was laid up with an attack of rheumatism, and could not rise from his bed, but sent a request that I would call at five o'clock. Moulinier, a clergyman, (or as he is termed here, a pastor) at whose house I had left a letter from Bishop Gregoire, called to see me. I found him an exceedingly intelligent, kind, and, as I think, a worthy man. He gave me much useful information respecting Geneva, and the best mode of proceeding, so as to see Switzerland with advantage; and kindly interested himself in procuring the means of our visiting without delay, the valley of Chamouny. We had much conversation on the subject of war, and he appeared to perceive its spirit and tendency, and to deplore its evils with a truly Christian sensibility.

I learned however, from this worthy man, that there is a great division in the town, on the subject of religion, and a want of that mutual charity among different sects, without which, it is questionable whether the genuine fruits of Christianity ever can be produced. How grievously has the cause of truth suffered, from the want of that spirit "which thinketh no evil, which is not easily provoked, which suffereth long and is kind, and without which all profession is as sounding brass or a tinkling cymbal?" What devastations has Christendom not endured, from the predominance of an anti-Christian spirit, among its warmest professors?

We dined to-day at the table d'hôte of our inn. The dinner was served much in the French style; soup, various dishes of meat and vegetables, wine, and fruit. The tuneful propensities of the Swiss, were evinced by a part of the entertainment. This was the abrupt entrance into the dining-room, of a man with a violin, and a woman with a guitar, who, placing themselves in a corner, and without saying a word, commenced playing, the woman accompanying her instrument with her voice. At the request of one of the company, they gave the national or Swiss air, called the "*Rans de Vache*," which is said to produce so great an effect on those who are absent from their country. The note is soft and tender, and I doubt not, produces an immediate association of ideas, which may powerfully affect the nervous system.

At five I called to see Professor Pictet, who with some effort came into the parlour, and gave me a welcome reception. I staid till late in the evening, and enjoyed a very pleasant conversation with him and his daughters, and with Dr. Marcet of London, who happened to be there on a visit. Professor Pictet has three daughters, all married, and who all reside occasionally, with their husbands and children, under the parental roof, constituting a united and truly interesting family.

LETTER XIII.

Geneva, 9th month (Septem.) 25, 1818.

MY DEAR ***** AND ****,

I ATTENDED a lecture on botany at eight o'clock this morning, (the 18th,) delivered to the collegiate class, by Professor De Candolle. It consisted, principally, of a defini-

nition of the distinction between species and varieties, which he illustrated by a reference to the animal kingdom, so as to bring his meaning fully within the comprehension of his young auditors. His style was clear and manly, and his enunciation so distinct, I scarcely lost a word. He impressed me with a very favourable opinion of his talents. His audience, besides the students, comprehended several amateurs of the town. Professor de Candolle is from the south of France, and is much distinguished by his publications on botanical subjects.

At Professor Pictet's, I met this morning his oldest daughter, Madame Vernet, wife of the President of the civil tribunal of Geneva. I found her to be a lady of that character, with which a stranger must be immediately pleased, and become almost immediately acquainted. Sincere and serious, yet open, affable, and kind, her countenance and address are at once a pledge of the amiable qualities of her mind. They live in the country in summer, and with her father and sisters in the winter. I accepted her invitation to dine with her to-day at her father's table. She is very active in charitable and religious concerns. Her oldest daughter is married, and her oldest son is now at school in England. A nephew, by marriage of Professor P.'s, took me to see a house he is building for himself. It is fifty feet square, and will cost about 50,000 dollars. He is his own architect, and the design does great credit to his taste. The principal material is a fine free-stone, found near the lake of Geneva.

19th. We set off this morning in a hired voiture, with a German driver, who spoke neither French nor English, on a visit to Chamouny, at the foot of Mount Blanc. The road lies mostly through vallies between alpine ridges. The villages are not very distant from each other, on this route; and their appearance, in general, indicates a greater degree of industry than those of the same extent in France. We entered Savoy, at a short distance from the lake; leaving, thereby, the government of Switzerland, and passing into the dominions of the king of Sardinia. The inhabitants of Savoy are mostly Catholics, an evidence of which was not wanting in the appearance of the crucifixes, and the great increase of beggars. We stopped at Bonneville, a town of about 4000 inhabitants, and much more pleasantly laid out than any we had recently passed through. In the middle of it is a large triangular area, with the houses facing it on

each side. While our Dutchman and his horses were reposing, we regaled ourselves in a small house, where, according to the usual notice over the door, "On donne à boire et à manger."* We found very good *vin ordinaire* and also a cheese, famous in Switzerland, *le fromage à Gruyere* and which is held in estimation at Paris. From the ceiling of the room were suspended enormous sausages, which we desired our pleasant little landlady to let us taste. Being thoroughly dried, they required no cooking, and we found them tolerably good. The attention which was paid us in this little place, and the grace and politeness with which we were waited upon, are characteristic of French and Swiss manners. In a ramble over the town, we entered a churchyard, and were struck with the appearance of a large crucifix. It was a carved image of the body of our Saviour, as large as life, nailed to the cross, and accompanied by the ladder, the sponge, the hammer, and all other implements connected with the crucifixion. Such exhibitions appear to me to indicate a degraded condition of the people, both intellectual and moral. But in this instance, as in many others, it must be the rulers of the people who cause them to err. Such a servile attention to outward forms, must tend to perpetuate the influence of priestly authority and superstition.

The river Arve, which had been on our right as far as Bonneville, we there crossed, on a stone bridge; beyond which the road lay through a finely cultivated plain, as far as Cluse, a considerable village, with narrow streets and heavy stone houses. We here crossed the Arve again, and followed its banks between two mountains, which rose majestically above us to the height, in many places, of 8000 feet. The side of the mountain on our left, presented, generally, an abrupt and perpendicular face of calcareous rock; the top of which, in some places, occupied our zenith. We could hardly lift our eyes to its awful brow, without sensations of terror. The passage between this tremendous wall and the river, was in some places, but just wide enough for the carriage, and a horseman on each side, to pass. We were convinced that we had actually reached the Alps, and were in one of the most romantic and sublime of their valleys. The road, winding along the river, was almost a perfect level. The mountain opposite was sprinkled, on its top, with a recent snow, which, in many of its cavities, had accumulated to a considerable depth, and would

* Eating and drinking to be had here.

not disappear till driven away by the sun of another summer. The verdant meadows, the orchards loaded with fruit, the clear and rapid current of the Arve, and the smoothness and beauty of the road, contrasted with the majesty of the mountain scenery, contributed to render the ride through this valley, interesting and delightful in the highest degree. The effect was much heightened, in several places, by water falls, issuing from the sides of the mountain. Two of these, *Nant d'orle*, and *Nant d'arpenas*, are very remarkable. They spring from the rock, at the height, probably, of 3000 feet from the valley, and falling perpendicularly from 600 to 800 feet, dash upon a shelving portion of the mountain, and rush with fury to the bottom.

The rocks of these mountains consist chiefly of carbonate of lime; some granite appears, which ought, perhaps, to be regarded as a kind of sienite, rather than true granite. The quartz, and feldspar, are very distinct, but in lieu of mica, it appears to contain hornblend. The stratification of the mountain, on the right of the Arve, is extremely irregular. The beds are sometimes perpendicular, in some places horizontal, in others oblique, and in others curvilinear, and twisted in the most curious and surprising order. In one place a stream of water flows immediately from the foot of the rock, without any apparent opening and in sufficient quantity to turn several mills. We passed through the village of Maglan, situated in the valley of the Arve. Many of the inhabitants of this town, it is said, leave their native valley, to seek their fortunes, as petty traders in Germany, and return home rich.

We arrived before sun down, at the village of St. Martin, where we were to stay for the night. The evening being remarkably fine, we crossed the Arve on a beautiful bridge, and walked over to Salenche, a very considerable village, opposite to St. Martin, and ascended a hill to view the effect of the sun's declining light, upon Mount Blanc. The scene was truly grand. The broad range of the mountain was fully before us, of a pure and almost glowing white, apparently to its very base; and which, contrasted with the brown tints of the adjoining mountains, greatly heightened the novelty of the scene. We could scarcely avoid the conclusion, that this vast pile of snow was very near us, and yet its base was not less than fifteen, and its summit probably more than twenty miles from the place where we stood. The varying shades of light, produced by reflection

from the snow, as the sun's rays declined, passing from a brilliant white, through purple and pink, and ending in the gentle light which snow gives, after the sun has set, afforded an exhibition in optics, upon a scale of grandeur, which no other region in the world could probably excel. Never in my life, have my feelings been so powerfully affected, by mere scenery, as they were in this day's excursion. The excitement though attended by sensations awfully impressive, is nevertheless so finely tempered by the glow of novelty, incessantly mingled with astonishment and admiration, as to produce, on the whole, a feast of delight.

A few years since I stood upon Table Rock, and placed my cane in the descending flood of Niagara. Its tremendous roar, almost entirely precluded conversation, with the friend at my side; while its whirlwind of mist and foam, filled the air to a great distance around me. The rainbow sported in its bosom; the gulf below exhibited the wild fury of an immense, boiling cauldron; while the rapids above, for the space of nearly a mile, appeared like a mountain of billows, chafing and dashing against each other, with thundering impetuosity, in their eager strife to gain the precipice, and take the awful leap. In contemplating this scene, my imagination and my heart were filled with sublime and tender emotions. The soul seemed to be brought a step nearer to the presence of that Incomprehensible Being, whose Spirit dwelt in every feature of the cataract, and directed all its amazing energies. Yet, in the scenery of this day, there was more of a pervading sense of awful and unlimited grandeur: mountain piled upon mountain, in endless continuity, throughout the whole extent, and crowned by the brightest effulgence of an evening sun, upon the everlasting snows of the highest pinnacle of Europe. In such moments of excitement, with what ardour did I wish for the company of some of those who were far distant, to partake with me in the pleasures of my alpine sensibilities, and to increase them by sympathetic emotion.

We returned to St. Martin before dark, and put up at the house of Chenet, called the "Hotel de Mont Blanc;" a much more appropriate and inviting appellation, than the "Hotel de Waterloo," a large inn at Sale nche. It is surprising how common this term has become in England, since the great battle. Every thing that can be strained to the purpose, is now à la Waterloo. To me it is disgusting, as I have no doubt that it is also to the better classes in Eng-

land. This is the first time I have seen a "Waterloo" hotel on the continent, and it shows that we have got fairly away from France, and French politics.

20th. Exchanging our Dutchman, and his old cabash, for a postillion, and a pair of strong mules, we mounted a vehicle, different from any I had ever set my foot in before : it is called a "char-a-banc." It is an open four-wheeled carriage, with two side seats, the passengers of each seat sitting with their backs to each other, and their faces to the wheels. The step on which the feet rest, is within a foot of the ground, so that to mount and dismount, is a matter of sport. The road from St. Martin to Chamouny, is too rough for a common carriage.

We continued our route through this valley, on the right side of the Arve, over a rich bottomed soil, and carefully cultivated, till we crossed a rapid brook, which flows into the Arve. This we ascended about half a mile, to St. Gervais, a house built in a kind of glen, under the mountains, for the purpose of a bathing place. Several springs arise here, of the temperature of 104° F. The water is saline, and remarkably transparent. Air is constantly rising in the spring, very copiously. I caught some of it in a tumbler, and found it to be incapable of supporting combustion.

Recrossing the Arve, and passing through the village of Chede, where there is a fine water-fall, and a beautifully transparent lake of small extent, we began to ascend the mountain. At Servoz, a decent little town, we stopped, and found a good inn. The neighbours were at church : they are mostly Catholics. On looking in, we saw the priest decorated in his robes, and performing his movements before the image and the altar. When these were accomplished, a Latin hymn was sung, which appeared to terminate the service. At the inn, I found a large collection of the minerals of the country kept for sale, and an attendant, who was well acquainted with their scientific names. At a short distance from Servoz, on an insulated bill, were the remains of a Roman chateau. Whether it had been the secreted habitation of some gallant knight and lady fair, who sighed to each other in this mountain solitude, or the abode of a feudal chieftain, who held dominion over his little tribe of mountaineers, we had not the means of determining.

We crossed again the Arve, in a very wild spot, having the lofty mountain of Buet on our left, and after a very considerable ascent, entered the valley of Chamouny, about

two o'clock. This valley is on the north side of Mount Blanc, and while it contains sufficient space for several villages and farms, it affords the finest position for the accommodation of travellers, who come to visit this most rugged and sublime of all the Alpine regions. The glaciers, of which there are five considerable ones, on this side the mountain, extend themselves into the valley, and are now making a gradual encroachment upon the meadows which surround them. I had before no just conception of the nature and appearance of a glacier. It is a vast body of ice, formed by the freezing of the water, which runs down from the snow, on the sides of the mountain, between its different ridges, congealing as it advances. The glaciers are much increased by avalanches, or bodies of snow, that break loose from the higher declivities, from time to time, and fall into the valleys. They must also be increased by successive accumulations of snow and rain, every winter. There are thus formed masses of ice, so great, that the heats of summer are insufficient to reduce them, though the valley is often very hot, and the streams which then flow from their sides, are very copious.

Leaving our car at the little village of Montcuart, we ascended to a considerable height along side of the Glacier de Bosson. The day was so warm, that the efforts of the ascent, put us into a profuse perspiration. Our way was at first over meadows, and then through groves of fir trees, continually ascending, till we reached the great platform of the glacier. We then mounted, by the help of our guide, this great icy ridge, and passed directly across it. We had engaged a guide at Servoz to conduct us across this glacier, which is the largest of all those connected with Mount Blanc. On leaving our char-a-banc to ascend the mountain, we were joined by half a dozen other guides, requesting the liberty to join us as conductors. It was in vain that we endeavoured to send them back, telling them we were already supplied, and should not want their services. They still officiously asked leave to accompany us, and persevered in trudging with us up the mountain, though we informed them that they need not expect to receive any compensation for their services, as they were not wanted. But on our arrival at the place where we were to ascend the glacier, the importance of these new attendants began to be apparent, and we found that without the assistance of nearly the whole number, our journey across the ice would

have been extremely hazardous, if not impracticable. Some were employed in cutting steps with hatchets, in the icy hills, to enable us to ascend; others went forward to select the safest paths; and had it not been for the great experience and the most devoted attention of these men, it would have been folly to attempt the passage. Two of them were constantly with each of us, bestowing the most careful and even affectionate attention to our safety. They feel the great responsibility of their charge, and are devoted from principle, to its faithful execution. On landing us safely on the opposite shore, they made no demand, but thankfully received whatever we chose to give them!

The width of this glacier, at the place of our transit, is about one third of a mile. Its surface exhibits the most frightful irregularity. Fissures of a foot or two feet in width, and many hundreds in depth, must be stepped over. Cavernous places exist in the great body of the glacier, into which streams of water are pouring with a loud and fearful rumbling. The portion which lay below us, was torn up into large conical peaks of ten or twenty feet in height, closely wedged together at their bases, and rearing their pointed tops in formidable and terrific grandeur.

The place where we crossed was remarkably level, compared with the surface both above and below us. We were provided by the guides with long poles, pointed with iron, and which we found extremely useful. The sun was so warm that the ice afforded only an agreeable freshness. It was an interesting spectacle, to observe on the same spot, these two extremes of nature; the freshness of the trees, and the verdure of the meadows, in alliance with such extended masses of ice and snow.

We were agreeably surprised, and unexpectedly refreshed after the fatigue of this ascending and descending march, by meeting on the side of the mountain, several maidens of the village, bringing with them clean tumblers, and decanters full of delicious milk, which they offered to us at a moderate price. We proceeded to the village of Chamouny, or as it is called, the Prieuré, and found excellent quarters at a hotel there. Of these there are two, the Hotel de Londres, and Hotel de l'Union, differing but little in their accommodations. The village contains about 100 houses. Two shops or cabinets of natural history are kept here, in which very good collections of the minerals and plants of this Alpine region, are exposed for sale. A suite of the former,

consisting of small specimens, may be bought for six francs, comprehending about one hundred varieties; and a little herbarium of dried plants may be obtained for less than two dollars, containing nearly a hundred species. One of these I bought of a boy, who appeared to be well acquainted with the scientific names of the plants and minerals of the valley.

21st. After an early breakfast, we mounted each a mule, and with our excellent guide, Michel Paccard, we set out for Le Croix de la Flegere, a position of the mountain on the side of the valley opposite to Mount Blanc. We rode for some time behind a flock of one hundred goats, which a herdsman was driving to pasture. These animals are kept for their milk, and they yield a very notable quantity of it. The declivity of the mountain was very steep, but our mules clambered up with a steady foot, and with surprising facility considering their size and the loads they carry. The "Cross" is at an elevation which required an ascent of an hour and a half. On gaining this almost dizzy elevation, what was our surprize to find a dozen children, mostly females, and one woman, already on the spot, prepared with decanters of fresh milk, grapes, pears, cakes, nuts and brandy for our refreshment. Knowing of our intended ascent, they had clambered up the mountain, with baskets containing all those articles, and were eager to induce us to accept of their commodities. Although we had brought a good store of provisions with us, we could not do less than to take some of their excellent mountain milk, and to eat of the fruit upon their own conditions, which were always, "*ce que vous voulez, messieurs.*"* Some of these little creatures that had clambered up the mountain, to gain a few sous, by the disposal of their provisions, could not have been more than seven years old.

The view which we obtained from La Croix de la Flegere, of the whole chain of Mount Blanc, its towering summit, its undulations, its lofty needles, and its immense cavities, all bleached with the frost of countless ages, were enough to fill the mind with the deepest reverence—nay, with devotional solemnity.

The glaciers which extend from the sides of this great sire of mountains, were exhibited in full perspective, as on an immense map, suspended over the valley. It was a spectacle too varied, too sublime, and altogether too pow-

* What you please, gentlemen.

erfully impressive to be either felt or understood by any description, however eloquent ; or by any graphic colouring, however true. There is no attainable situation on the sides of Mount Blanc itself, which could have given us half so correct and expanded a view of the whole scenery of its awfully extended ridge, and the towering height of its majestic dome, its glaciers, and its needles,—in short, of the entire physiognomy of its northern front, as that which we obtained from this elevated point of the opposite mountain. It was on this account that I had decided on taking the advice of Professor Pictet, to ascend to the cross of La Flegere, on Mount Brevent, as the means of gaining a correct notion of the topography of this particular region,—in preference to the views we should have had from any of the more fashionable places of resort on Mount Blanc itself.

The thunder of avalanches was heard at very short intervals, during our continuance on those elevated summits. They consist of large bodies of snow and ice, which, accumulating by degrees on some precipitous base, acquire at length a form and position, which render that base inadequate to their support. When this moment arrives, the mass disengages itself from the surrounding matter, and plunging with dreadful fury from its giddy elevation, breaks into innumerable atoms upon the glaciers below. The neighbouring mountains reverberate the thunder of its fall, and prolong the sound by repeated echoes.

We frequently witnessed the motion of these falling masses. They do not always consist of ice and snow alone, but, by their weight, and the prodigious momentum with which they impinge against the rocks and trees, in their descent, they carry down with them numerous fragments, some of which are of large size. The avalanches of the spring and summer, generally consist of larger and more coherent masses than those of the winter. The tremendous velocity which they acquire in these mountain leaps, sometimes occasions such a lateral pressure of the atmosphere, as to prostrate the trees on each side, and even to overturn the habitations which are situated on the hills opposite to their descent. In crossing the glaciers, one is surprised to meet with such quantities of rocks and other terrene masses, lodged in bodies of ice of some hundreds, and, probably, thousands of feet in thickness. Those earthy and more ponderous portions of the falling materials accumulate, by the wasting of the upper surface of the ice during summer,

into large heaps at the bottom and sides of the glaciers, and add much to the terrific appearance of this most gigantic display of mountain revolution.—We were obliged to descend without our mules, for had we undertaken to ride them, the least stumble might have plunged us headlong down the mountain. To those unaccustomed to this kind of travelling, the descent from a great elevation, is found to be quite as fatiguing as the ascent. No remarkable change in the atmosphere was observable at the height to which we attained, and I think it probable, that the accounts we have sometimes heard of the difficulty of breathing on the tops of mountains, may be, in part, exaggeration ; or, at least, that the difficulty may arise in some measure, from the peculiar state of the atmosphere at the time, as well as from the elevation ; for we not unfrequently experience a degree of pulmonary obstruction, from a want of atmospheric elasticity, on level ground. Our guide, on whose veracity, we placed great confidence, informed us, that he was, three years ago, on the highest pinnacle of Mount Blanc, and that he experienced no uneasiness whatever. I would not, by any means, imply that the atmosphere, on high mountain elevations, is equally favourable to respiration as on the level of the ocean : the statements of Saussure and others would abundantly disprove this ; but merely to express the belief, that the general opinion on this subject may go beyond the truth.

Upon reaching the plain we rode to the source of the Arveron, one of the branches of the Arve. This stream rises at the foot of the glaciere De Bois, from which issues sufficient water to produce a large and rapid brook. A singular and curious appearance is presented at the spot where this river flows from the ice. The small streams, which run in secret channels down the glacier, unite previous to their discharge, and then burst out with such force as to produce at once an impetuous current. The violence of this eruption wears away the ice at the place of its exit, and forms a large vault or cavern, which, at particular seasons, may be entered to a considerable depth. This vault is said to present a sublime but terrific aspect. The very fragile materials of which the roof is composed, and the perpetual changes it is undergoing, would be sufficient, one would think, to deter the boldest adventurer from entering far, or remaining long, in this icy cavern. Yet the curiosity of one individual, a respectable citizen

of Geneva, impelled him to an act, which was attended with fatal consequences, and which will, doubtless, serve as a warning to others. He entered this cavern, with his son and nephew, and, when fully within its enclosure, he fired a pistol, to observe the effect of the sound; but the concussion of the air so jarred the brittle fabric as to bring down a large mass of ice upon the unfortunate adventurers. His son was killed, his nephew was grievously wounded, and he himself had one of his legs broken.

This glacier is making advances upon the plain, and has nearly overtaken a house, which, when first built, was at a becoming distance from this creeping mountain of enduring ice. Its height, as it advances, is surprisingly great. I asked the guide his opinion, and he said, it was at least 300, and, in some places, he thought, 500 toises (3000 feet) above the plain. It presents a surface, on all sides, extremely rugged.

Although Mount Blanc appears, at all seasons, to be wrapped in a deep fold of snow, of a brilliant white, it is not, as my guide stated, to be considered as snow, but rather as a covering of ice from bottom to top. The heat of the sun, during the long days of summer, softens the particles of snow; and by the cold of the night, they are compacted into ice. Over the surface of this, or rather in gullies worn in the ice, water, during the warm season, is constantly pouring.*

The number of visitors at Chamouny, more especially since the general peace, has been remarkably great; but it is still more remarkable that this valley should have remained unexplored, and almost unknown until 1741. In that year its position and superior advantages for viewing Mount Blanc, were made known by Pococke, the celebrated English traveller. It is now as populous as the soil will admit of; and indeed a great portion of its inhabitants must be supported by travellers, whom its wild and wonderful scenery attracts to this spot. We left this interesting valley about two o'clock, to return to Geneva, not without impressions arising from the visit, which can never be effaced, while memory retains its powers.

The inhabitants, of this and the adjoining valley, as far as our intercourse with them extended, appeared to partake of much of that amiable simplicity of manners which have usually been ascribed to the Swiss character. The great

* From the account of travellers, however, it is not to be doubted that the top and sides of the mountain are often covered with loose snow.

influx of strangers, at Chamouny, will, it is to be feared, be productive of no benefit to them in a moral point of view ; but it was pleasing to discover, that, notwithstanding the introduction of many thousands of visitors from almost every country of Europe, during the last few years, and the consequent enlargement of their commerce and their gains, no very perceptible deterioration has yet become obvious. Their peculiar habits and customs have been fixed by the authority of ages, and will not very speedily yield to the influence of temporary occurrences. The agricultural labours of the valley are performed chiefly by the women. The men are engaged as guides to strangers, in collecting minerals and plants for sale, or in hunting the wild chamois in his cloud capped haunts, inaccessible to all but those who are accustomed to clamber over those dizzy heights.

Although the summit of Mount Blanc, is in plain view from the priory or church of Chamouny, and cannot be considered as more than seven English miles distant from it, on a line drawn upon the slope of the mountain, yet no one, who is aware of the nature of the undertaking, will wonder that this pinnacle was never marked by human foot-step, until within the last forty years. It was not to be expected, that while the mountain was looked upon only with the gaze of blank indifference, any motive could exist, that would tempt an individual to make the fearful effort ; or that until science had kindled its living fires in the mind of the traveller, and given to his curiosity a noble and dignified aim, that this perilous journey would ever be encountered.

The researches of modern philosophy into the nature and qualities of the atmosphere at different heights and places, naturally prompted the desire to ascend to the highest of European elevations, and rewards were held out, (in a particular manner by the celebrated Saussure,) to any one who would point out a practicable and safe route to the summit of Mount Blanc. Various unsuccessful attempts were made by different persons, some of whom succeeded in attaining to elevations much higher than any one had ever before trodden. Saussure himself made the attempt, in company with Bourrit of Geneva, and assisted by 12 guides, well provided with instruments for observation. They advanced beyond the Dome de Gouté, a remarkable point at an elevation of more than 8,200 feet ; but a violent snow storm prevented their farther progress. This was on the 14th of September, 1786. In July next year, James Bal-

mat, one of the guides of Chamouny, passed a night on a spot above the Dome de Gouté, and discovered, as he believed, a way by which the summit might be gained. On his return to Chamouny, he was seized with illness, occasioned by the fatigue and exposure he had endured on the mountain. He was attended by Dr. Paccard; and to him, as a reward for his professional services, he communicated his discoveries, and offered to conduct him to the summit. Accordingly, on the 7th of August, they left the priory, and passed the following night on the heights of La Cote, a mountain which overhangs the Glacier de Bosson. The next morning they passed over the Dome de Gouté, and struggling heroically against the most pinching cold, a violent and piercing wind, and excessive fatigue, they attained the pinnacle for the first time within the knowledge of man. Here they remained half an hour, during which time, their provisions and ink froze in their pockets! They effected their descent without any serious injury, and thus prepared the way for future adventures.

Their example was soon followed by the enterprising and indefatigable Saussure, accompanied by a servant and eighteen guides, who carried his tents, philosophical apparatus and other necessaries. He gained the pinnacle, which he found to be a ridge, nearly horizontal, extending east and west, and so narrow as scarcely to allow two people to walk abreast. He remained on the summit four hours and a half, which afforded time for those extensive and interesting observations, which he has published in the fourth volume of his "*Voyages dans les Alpes*." I can do nothing more than merely to give some of the principal results of the different observations that have been made upon this mountain. A history of the various successful and unsuccessful endeavours to scale its hoary sides, with the discoveries and calculations of different philosophers, would fill a volume. The height of the summit, taking the mean of some of the best observations, is 2450 toises=15,673 English feet, or nearly three miles above the level of the sea. It is 14,556 feet above the lake of Geneva, and 11,532 feet above the vale of Chamouny. Its height is 5236 feet less than the summit of Chimborazo, and about 10,000 feet less than the highest peak of the Great Himalaya chain in Asia. But Mount Blanc rises higher above the level of the adjoining country than Chimborazo, and therefore makes a more conspicuous figure in the eye of the observer as a

distinct and insulated object. The temperature on the summit is from three to five degrees of Fahrenheit, below freezing in the summer. Saussure's thermometer was at 27° F. on the top of the mountain, while that of Sennebier at Geneva was at 82° F. The barometer at the same time, viz. 3d of August at noon, was 16,181 inches, (English,) while at Geneva it stood at 29,020 inches. There is no bare rock to be seen within 150 yards of the top; and almost the whole body of the mountain on the north side, excepting those abrupt and sharp pyramids, called needles is enveloped in an everlasting mantle of ice and snow. The rocks of the highest peaks are considered by most geologists as granite; but Professor Jurin, of Geneva, one of the most learned naturalists of the age, told me he had serious doubts of the correctness of the term granite, as applied to those rocks. The air of the summit, according to Saussure's hygrometer, was six times less humid than the air of Geneva. The electricity of the atmosphere was positive; and experiments with lime water showed that it contained carbonic acid. The least exertions, occasioned to Saussure, a laborious and painful respiration. The sound of a pistol was as feeble as that of a Chinese cracker let off in a room.*

At St. Martin, where we again lodged, we found a number of persons, chiefly English, on their way to Chamouny. A heavy rain this morning did not prevent us from pursuing our journey toward Geneva.—Agreeably to a previous invitation, I stopped at the dwelling of Vernet, with the intention of staying all night. Their country residence is about five miles from the town, on the border of the canton, near Savoy. In addition to the pleasure of a kind and courteous reception, I had the satisfaction to meet there with three female visitors; two of them from Scotland, (a lady Car-

* Two of my American friends, Dr. Van Rensselaer of New-York, and Dr. Howard of Baltimore, ascended to the top of Mount Blanc, accompanied by nine guides, on the 12th of July 1819, and remained an hour and a quarter on its highest pinnacle.

On the 11th of the following month, Captain J. Undrell of the British navy, also reached the top, where he spent three hours. "The thermometer in the sun was 33°, placed upon the snow with the same aspect, it sunk in five minutes to 25°. Suspended towards the north in a cold current of air, it was 14°; and in the same spot with the bulb in the snow, fell to 8°. He caused a pistol to be discharged several times, and found that the cessation of the report was instantaneous. The very highest rock is highly crystalline hornblende, and steatite. The latter might be mistaken for compact feldspar, but it yields to pressure and the knife. The rock called Petit Mulet, is the protegens of Professor Jurine, consisting of quartz, feldspar, and steatite."

Annals of Philosophy, June, 1821.

Two unsuccessful attempts to ascend Mount Blanc, were made by Dr. Hamel, counsellor of state to the Emperor of Russia, in August 1820. In the last of these the whole party was in imminent danger, and three of the guides actually perished.

nigie and her daughter,) and the other from England. It is rare to meet with persons, of either sex, of more improved understandings than were the ladies of this little group; and we had an intellectual and very agreeable evening. They all spoke both French and English, and the conversation was conducted in either language, as inclination directed. The topics were mostly of an elevated character, and seasoned, throughout, with the evidence of piety and Christian benevolence. We were joined, in the evening, by Vernet himself; whose official duties, as one of the judges of the canton, occupy much of his time, and induce him, in conformity to custom, to leave to his wife, the principal management of her house and family. And happy would it be, if maternal and domestic influence were exercised in all cases with the same enlightened judgment, piety, and feeling. They have five children, three of whom are at home. Before we retired to rest, the servants were called in, (six in number,) when the mother read, very seriously, first a prayer, and then a chapter of the New Testament.

23d. Vernet, being obliged to be in town seasonably on the days of session, we took an early breakfast, and I parted from his worthy family, with sentiments of great friendship and respect. He brought me to Geneva in his charabanc, (a neat little vehicle, peculiar, as far as I know, to Switzerland,) which he drove himself. We passed through one or two villages, which formerly belonged to Savoy, but which are now, agreeably to the last political demarkation, attached to the canton of Geneva. The Savoyards are nearly all Catholics; but notwithstanding that the canton is under a Protestant government, they are well satisfied with the change; for the Sardinian government is said to be chargeable with a want of liberality toward its subjects. Vernet informed me, that as far as the experience of the tribunal over which he presides would justify a conclusion, it might be inferred, that the principles of the Protestant religion were more favourable to morals, than those of the Catholic. But so many other things, besides mere religious dogmas, are to be taken into the account, in deciding this question, by the record of a court of justice, not much reliance, he thought, could be placed in their result.

Being introduced to Professor Prevost, I had a pleasant conversation with him, prior to the commencement of his lecture, which I attended. He has the department of moral

philosophy in the college ; but to help out the dryness of his subject, which is concerned only with the inward light, he unites optics with it, and lectures, once a week, on the light of the sun. He is justly esteemed as a learned man, and a sound reasoner, and has long been known, as one of the promoters of natural science. He conducted me, after the lecture to the rooms of a reading society, which has recently been set on foot. One apartment is appropriated to journals, domestic and foreign, and is well supplied. In another room, a good foundation is laid for a library ; and a third is appropriated to the German language. In other apartments, lectures are to be delivered, for the benefit of the town, on such physical and moral subjects, as may accord with the prevailing taste. This institution is quite in its infancy, and its eventual success is uncertain.

Dr. B. introduced me to Professor Jurine, the friend and frequent companion of Saussure. We spent an hour or two in his cabinet, which comprehends an excellent collection of minerals, in which are not wanting those which particularly belong to the United States. This cabinet is remarkable for its variety, and the neatness of its arrangement. It includes likewise an entomological collection, the objects of which are disposed with uncommon neatness and advantage, between two glasses, in little frames, so that they can be viewed on both sides, without exposure to the air. Professor Jurine appeared to me to be a mild, agreeable, and very estimable man.*

24th. The table d'hôte of our inn, affords excellent fare; and in sufficient variety. The lake of Geneva contains about twenty-nine varieties of fish, some of which are very fine.

Professor Pictet conducted me to the Academy of Painting. It contains but a small collection ; but the school for drawing attached to it, appears to be well supported. We went to see the artist Gaudin, whose models of the Alps are so justly admired. They are beautiful representations, in wood, of different portions of Alpine scenery, exactly conformable to what would appear, from a bird's eye view, of the district represented : the lakes are made of glass. He is preparing one, which will cover a surface of sixty-two square yards, and which will represent the greater part of Switzerland, with its lakes and elevations.

We afterwards called on Dr. Marcet, and were intro-

* He died on the 20th October, 1819, after three days illness.

duced to his wife, known as the very sensible and judicious author of conversations on chemistry ; and more recently those on political economy. We found there also, Professors Prevost and De Candolle. They had been amusing themselves with sending up a paper balloon, three feet in diameter, which rose to a great height, and then took fire. The remainder of the evening I spent with Alderman Wood, and family, who had just arrived from Italy.

25th. I attended this morning a lecture by Professor Pictet, on galvanism. He conducts his course with little apparatus, and that which he does use, belongs mostly to himself ; the college not being in a condition at present to provide itself with instruments. He was therefore obliged, in illustrating the facts of galvanism, to use diagrams drawn on a black board with chalk. The professor's table is covered by a board of this kind, the surface of which is preserved by a folding lid or cover, which is fastened by a lock. He did not enter much upon the *theory* of galvanism. He showed the students Dr. Wollaston's miniature battery, and the eagerness with which they endeavoured to see and comprehend its action, sufficiently evinced the advantages of experimental illustration, over a mere verbal definition, however correct and elaborate. The professors in this college, question two or three of the students, upon the principles of the last lecture, at the commencement of the succeeding. The names of those to be questioned, are drawn by lot, so that none knows upon whom it will fall. The lecture-room of the professors (the same room serving most, or all of them,) is a very indifferent one.

We dined with Alderman Wood and family, at their lodgings. The rank which this gentleman has held, as Lord Mayor of London, for two successive years, and that which he now holds, both as a magistrate and member of parliament for the city, demonstrate the confidence placed in his fidelity and public spirit. His unaffected affability, without the least shadow of pride or hauteur, has rendered him the most popular man in London. At his first election in parliament, he was chosen without opposition ; and at the last, his name was by far the highest on the successful ticket. His attention to charitable and humane institutions, proceeds, I believe, from principle. He makes no pretensions beyond his acquirements. He has a son, a youth of sixteen, in the college at Geneva.

Having introduced Professor Pictet to Alderman Wood

and family, the evening was spent very agreeably at the house of the former, where were assembled a considerable number of professors and other citizens. Among them was M*****, a distinguished surgeon of Geneva, and a well informed and enlightened man. His wife is an Englishwoman, and two of his daughters are married, and settled in England. He is pretty well acquainted with the state of our country, and takes a lively interest in the condition of the blacks. Among the incidents of the evening, was the narration of an occurrence of second-sight, in a person under the influence of epilepsy. He could hear distinctly what was said to him, when the mouth of the speaker was placed on his breast. He was aware of the passing by of a person in a carriage, whose name he mentioned, and whom he could not possibly see. He replied appropriately to some remarks expressed to him in writing, by drawing the paper across his lips, and thus ascertaining its contents; having his eyes the whole time closely shut! What credit may be due to the story, I cannot affirm, but it would certainly require a great weight of evidence to place it in the rank of unquestionable facts; and yet, so mysterious is the nature of our sentient principle, as to render it important, that we do not carry our incredulity too far, in relation to its spiritual faculties.

I had the exquisite satisfaction of receiving, this afternoon, your letter of the last month, containing the most favourable accounts of your welfare.

My friend B. Dockray of Manchester, from whom I had received a letter when in Paris, signifying his intention to join me in Switzerland, arrived this evening, greatly to my satisfaction, as my American companions had expressed a wish to abandon their project of visiting Switzerland at this time, and to go directly into Italy. He was accompanied by Dr. Sims of Manchester, a young man who had recently graduated as M. D. at Edinburgh. They are both members of the Society of friends.

LETTER XIV.

Hofwyl, 10th month, (October) 3, 1818.

MY DEAR *****,

IN company with some of our London and Genevese acquaintance, among whom was one of the magistrates of the

town, we visited the asylum for the insane, the hospital, and the prison. The two former join each other, or are rather two parts of the same range of buildings. They have both the serious disadvantage of having been constructed before just notions were entertained, of the most salutary modes of treatment, more especially, of those who are affected with mental disorders. The rooms are, accordingly, small and awkwardly arranged, the court-yard paltry and inconsiderable, and the cells paved with stone, damp, and uncomfortable. The number of insane is but small. The convalescents we did not see, as they are properly kept out of sight. Those maniacs which we did see, were mostly in a high state of phrenzy. One woman was singularly affected. Though in perfect health of body, she fancies herself to be under a mortal and disgraceful disease, and loudly and incessantly bewails her condition. Another of the female lunatics, most happily employs herself in knitting coarse straw into shirts, and bonnets, a store of which she keeps by her. The whole of this department appeared to me to stand greatly in need of reformation. The hospital is better conducted, tolerably clean, though exhibiting but little of that nicety and taste, which are constantly kept in view in most of the similar institutions in England and America. The number of patients is at least 150. The prison is near the hospital, and is very badly constructed, but judicious efforts, are used to classify the prisoners. Those under age are separated from the adults, and in some cases, removed from the prison to the hospital, where they are employed in the service of the house, and, according to their deserts, allowed the use of the yard, and even the liberty of visiting, occasionally, in the day time, their connexions in the town. Some attempts have been made to introduce labour, and a few of those who have trades are kept at work. Very few persons in Geneva, are confined for debt, and at the time of our visit, there was only one. The magistrates do not commit debtors, except in particular cases, that is to say, for debts contracted in a particular way. Between sixty and seventy prisoners were in the gaol, at the time of our visit. The poor of Geneva are mostly assisted at their own houses, and their number is so great, that one in six of the whole population, have recently received charity. A prize was offered some time since, by the Economical Society of this town, for the best essay on the means of obviating the evils of pauperism. The

committee have received twenty-six papers from different places, but have not yet had time to read them all. Professor P., who is one of the committee, on reading the report of the New-York Society for the prevention of Pauperism, which I lent him, had it immediately translated.

In our walks we stopped at the School d'Enseignement Mutuel. It was not the day of admission to visitors, but we apologised, and were let in. It is a new establishment; and the room is arranged in the usual Lancasterian manner. The number of scholars is about eighty, and the system pursued appeared to be very similar to that of the schools in England.

27th. We left Geneva, about seven, in a hired voiture, for Lausanne, distant twelve leagues. The price of the carriage was twenty francs for two days, and six francs to the coachman. The morning was delightful, and the road, (as good as possible,) extending along the borders of the lake, afforded the most agreeable prospects of finely cultivated farms, handsome country seats, and frequent villages, with the high chain of Mount Jura on the left, and the silvery tops of the Alps, beyond the lake, on our right. The agriculture of Switzerland is certainly better than that of France, and equal, if not superior, to that of England. The fine shape and quality of the cattle are very striking. At Coppet, a handsome village of 3 or 4,000 inhabitants, we left the canton of Geneva, and entered that of Pays de Vaud. This village is distinguished as the residence of M. Necker, and of his celebrated daughter, Madame de Stael. They are both buried in the grounds of the chateau; which is at present occupied by the Duke de Broglie, who married the daughter of Madame de Stael. While the gens-d'armes were examining our passports, we walked to the chateau. It is a plain, but respectable looking mansion, but we had not time to ask for admission.

At Rolle, we breakfasted at an excellent inn, and walked through the town, which is very pleasant, and contains, probably, 3,000 inhabitants. Between Nyon and Rolle we passed the chateau Frangins, which was formerly occupied, and is still owned, by Joseph Bonaparte. It is a spacious edifice, and finely situated for health and prospect. Morges is a larger village than those already mentioned, and like all the towns and villages I have seen, is well paved with stones. We arrived at Lausanne, at half past three, and found decent accommodations at the Balances d'or. We

walked, while our dinner was preparing, towards the lake. The vine is cultivated on the north side of this fine sheet of water, the hills facing the south affording an excellent soil and temperature for their growth and maturity. Taking a guide, I walked to the country residence of Grand de Valency, about a mile and a half from the town; delivered a letter of introduction, took tea with him and his lady and enjoyed a long conversation on America, Switzerland, literature, and the institutions of the age. He is an elderly gentleman, of large estate, very influential at Lausanne, and has spent much of his time at Paris. He and his family were intimate with Dr. Franklin, Adams, Jefferson, and Morris, as our ambassadors at France. His wife is a sensible woman, and very communicative. She furnished me with several tracts, published by a tract society in Lausanne, and evidently takes much interest in the efforts that are now on foot, for enlightening and Christianizing the lower classes of society. I left them at a late hour, and after several invitations to remain all night, which my engagements would not allow me to accept.

This being the first day of the week, I had an opportunity of comparing the habits of the Swiss with those of the French, relative to a day of rest, and Christian worship. I need only say, that the difference is greatly in favour of Switzerland, and of Protestant principles.

28th. Being introduced to Dr. Verdeil, a physician of Lausanne, by a note from Grand de Valency, I found him to be a very sensible and learned man. He accompanied my companions to the hospital, while I delivered an introduction to M. A. Greaves, an English lady, who resides in the family of Dr. Levade, a minister, and professor of theology in the college of this town. She is celebrated in this place, for her devotion to the charitable and religious associations of this canton. The establishment of the tract society of Lausanne is ascribed to her, and she is the most active agent of the Bible cause. We had half an hour's conversation on subjects interesting to us both. She represented the state of religion as being low in Switzerland; having to struggle, on the one hand, against infidelity, which unhappily, has too much infected many of the higher ranks, —and, on the other, with the zealous efforts of the church of Rome, to maintain its ascendancy, and to gain new proselytes. The re-establishment of the order of the Jesuits, by the reigning Pope, has been done with this view.

"We know," said she, "that the gates of hell will not prevail, but appearances are nevertheless very threatening." This short opportunity gave me a most favourable impression of the qualifications, both of head and heart, which this lady possesses, to do good, and her disposition to exert them.

Not being able to join my companions, and Dr. Verdeil, in their visit to the prison, I copy the statement of my friend B. Dockray, relative to this institution. "Dr. Verdeil, conducted us to the Maison de Force. All the confined are sentenced, some to twenty or ten, or five periods of imprisonment, but all for crimes of magnitude. Murder alone, is punished with death, in the Canton de Vaud. The prisoners were all actively occupied in carding, spinning, weaving, or plaiting straw for hats, slippers, chair-bottoms or mats. The women, wholly separate, are employed in nearly the same way, under female inspectors. Those who are accustomed to any mechanic employment, as shoemaking, chairmaking, or other occupations that may be followed in prison, are employed in that way. If not industrious they are subject to punishment. They have besides a certain proportion of the proceeds of their labour.

"Offenders in less aggravated cases, are secured in separate apartments, and are generally employed. There is no idleness in the prison.

"Besides this establishment, in the same building are two stories appropriated as an infirmary, through which the doctor attended us. There are forty patients in the house. The dispensary is also very useful to the poor of Lausanne.

"The doctor mentioned to us an establishment in Lausanne, for the discipline and reform of young convicts, and refractory young persons, whose friends commit them to this means of reclaiming them. They are taught and employed, and restricted to regular habits."

The poor are supported in this canton, as I was informed by Grand de Valency, by a fund, arising from property which has long been in the possession of the government of the canton for this purpose. But no person that is not a citizen, i. e. who has not the right of Bourgeoisie, can claim the protection of this fund. In cases of extraordinary distress, resort is had to private collections, but never to taxation. The right of Bourgeoisie may be purchased. At Lausanne it is worth forty louis d'ors. The fund does not increase much. Dr. V. took us to the School d'Enseignement Mutuel. The building is a very poor one, the school

is in an upper room, and the access to it, narrow and difficult. The number of scholars was about eighty, and many were absent on account of the measles. Provision is made in Switzerland for the education of every child, and parents are *obliged* to send their children to school. The teachers are paid by the government, so that the schools are gratis to the parents. We went into one of these schools, which contained about thirty scholars of the poorer families, and appeared to be badly conducted. I suggested to Dr. V. the advantage of uniting several of these schools into one, and adopting the improved plans of tuition, paying more attention at the same time to neatness and respectability of appearance. He said that some measures had already been taken to effect this object, which he considered truly desirable. This gentleman informed us, that in several parts of Switzerland, saving banks were long in use ; prior, as I understood, to their first introduction into England. They are called *Caisses d'Epargnement*.

Lausanne contains about 11,000 inhabitants, and is built on three hills, which subjects the citizens, necessarily, to a great deal of ascent and descent. The views of the lake and mountains, from some parts of the town are delightful. I here took leave of my former companions, who intended to return to Geneva, and thence proceed to Italy ; and with my English friends set out for Vevey, distant four leagues. The road passes along the lake and on the edge of a mountain, and is highly romantic. The declivity is very steep ; but so well adapted are the soil and air to the perfection of grapes, almost every foot of ground is cultivated. The side of the mountain is converted, by means of stone walls, erected one above another, and extending in horizontal directions, into terraces or platforms, and on these the vines are raised. At St. Saphorin, a considerable village, we obtained some grapes of a woman, fresh from the vineyard. They were the best I ever tasted. These grapes are considered, indeed, as inferior to none in Europe ; and the land in this immediate neighbourhood sells for 12000 francs per arpent, so highly is it esteemed for the vine. Vevey is a pleasant town on the lake, containing 3,500 souls. It has some very decent buildings, and a handsome market-house, better than any that I ever saw in America, in a place of equal extent. We took a boat and a batelier, and went out on the lake. The scenery was delightful. The Alps on the south, in some places

covered with snow ; villages scattered on each border ; the castle Chillon, at the upper extremity, so famous in history, and in the poetry of Lord Byron ; the transparency of the water ; the Rhone pouring its flood into the lake ; the mildness of the evening ; the vapours, skirting the sides of the mountains ;—these, and other accompaniments, rendered this little watery excursion exceedingly pleasant ; and nothing was wanting but the company and sympathetic feelings of my ***** or ****, to complete the happiness of the moment. The village of Montreux, situate in a valley, at the head of the lake, appeared in sight. From this village, a number of Swiss have emigrated to America ; and have established themselves in the state of Ohio, where they have built a town, which they call Vevey. Our boatman, on finding where I was from, was earnest in asking questions relative to the situation and probable prospects of his countrymen ; and in his questions, he evinced a sound and reflecting mind, prudence, and sagacity. Indeed, all that I have seen of the habits of the lower orders in Switzerland, speaks loudly in favour of the extension of knowledge, and of moral and religious principles.

We engaged our postillion, whom we found to be a very obliging and good-tempered man, to take us to Fribourg, in his little calash. After going to bed, unless my ears deceived me, I heard the hour of the night announced by six town clocks, one after another. The Swiss are great lovers of clock-work, bells, and music.

29th. The road, for a considerable distance from Vevey, was rapidly ascending. We met a great number of peasants going to market ; carrying, for the most part, their productions, either on their heads, or in long baskets or buckets of an oval form, with flat sides, and suspended on their backs, by a strap round the shoulders. The greater number were women ; and certainly of a more interesting aspect, more handsome and graceful than any I had ever before noticed in a similar condition of life. The costume of the females varies very remarkably in the different Cantons. In this part of the Pays de Vaud, they wear straw bonnets, very large, and with a high button or handle on the centre of the crown. Their hair is suffered to grow till it becomes a prodigious mass, (or, in defect of quantity, they help it out by a cushion,) and then twisting it behind into a large roll, they fasten it, in the shape of a chair cushion, to the back part of the head ; generally inter-

spersing a quantity of powder. Such was the head-dress of these market girls ; and which they doubtless considered ; as in no respect incompatible with the heavy loads which they carried on their backs.

We breakfasted at Chatel St. Deny, a small town, composed of Catholics. The church was decorated with a great variety of ornaments, outside as well as within. A stone basin of consecrated water, was placed at each door ; into which the females, as they came out, dipt their fingers and crossed themselves. One of them, I observed, took out some water in the palm of her hand, and sprinkled it on a grave.

The style of farming continues to be good, yet some awkward customs prevail. I noticed a plough at work, drawn by two horses and a *bull* ; the latter animal being harnessed as a leader, and guided by a *girl*, by means of a rope fastened round his horns. Cows are frequently harnessed, and made to work like oxen ; and I know not why they should not be, where women are to be the drivers. In one field, we saw a cow and a horse drawing together, side by side, at a plough. At Bulle, a town within the canton of Fribourg, we stopped to refresh, and to look around us, for an hour or two. This place was almost wholly destroyed by fire, eleven years ago ; being, at that time, built chiefly of wood. The houses are now mostly rebuilt with stone, and covered with tile. A young man of respectable appearance, voluntarily conducted us to the church ; a new building, with a pretty high steeple, containing five bells. The decorations of the interior were costly, but more chaste than ordinary. In this town there is a convent of Capuchins, containing twelve friars. We went to see them. They dress very coarsely, and wear their beards at full length. We met one of them in the road, on our approach to Bulle. He saluted us very courteously, and on asking our coachman who he was, he replied, " Monsieur, c'est un Capuchin, ils ont un couvent ici à Bulle."* What do they do, said I, in their convent ? " Qu'est-ce qu'ils font ? Ils prient le bon Dieu pour ceux que travaillent."† The friar whom we met in the convent, was a mild and good looking man. He told us there were but twelve of them, and signified that they were very poor. Their apartments were, indeed, plainly furnished ; and it was evident that

* Sir, he is a Capuchin,—they have a convent here at Bulle.

† What do they do ?—they pray to God on behalf of those who work.

they did not consider water as given only for the purpose of washing away outward spots. Cleanliness forms no part of the religion of these *professors* of poverty and abstinence. They have, in their garden, an *escargotoire*, or enclosure, where they keep and feed snails, for the purpose of food, and they had a notable crop of them.

The town of Gruyere is in sight from Bulle. It gives a name to the cheese made in this part of Switzerland, and which has a high reputation. It is a rich, well flavoured cheese, but rather hard. At Fribourg, we obtained good accommodations and an excellent supper, at the Merchant's Inn.

30th. Having a letter for Le Pere Girard, whose genius and philanthropy have qualified him to effect the most important improvements, in the education of the children of Fribourg, and to establish a school, which has become famous throughout Switzerland, I hastened this morning to the convent where he resides, and received the unwelcome intelligence, that it was the time of vacation, and that he had gone into the country, to stay some days. I inquired of one of his assistants, who there was, that could give me correct information, relative to the system pursued in the institution, over which the Pere Girard presides, and he referred me to the Chanoine Fontaine, as an enlightened man, and a friend of Pere Girard. Upon waiting for this ecclesiastic, at his house, he came in from the morning service, dressed in his priestly habiliments, and looked at me with some surprise. I apologised for coming to him without an introduction, and explained frankly the object of my visit. He then, very cordially, offered to give me all the information he could, and appointed ten o'clock to receive me and my friends. He regretted that Pere Girard was absent, as I should find him, he said, a very interesting man in conversation, and willing to communicate any information, relative to his system.

At the appointed hour, we went to the chanoine's, and were introduced into his picture room, which contained a very neat collection of paintings, one of which, he said, was by Rubens, (the descent from the cross,) and the original design of his great picture at Antwerp. He explained to us loquaciously, the various pictures of the collection; and then, placing chairs in a circle, invited us to sit down, and commenced an eloquent statement, first of the etymology of the word *Education*, implying to draw out, or develope, and not to increase, or to superadd. He next adverted to the

common error, as he called it, of supposing that mathematics can have much tendency to expand and mature the faculties of the mind; and urged the superiority of language, as an instrument or means of effecting this important end. He considered it of high importance, that plans of education should tend to open and perfect the qualities already existing in the mind, as the sun swells and opens the bud, and heightens the colours and fragrance of the rose. He informed us that the Pere Girard's views, and his own, corresponded on this subject; that the latter, being a man of penetration, and acquainted with human nature, and possessing a spirit of great philanthropy, had proceeded, step by step, trusting only to experience, in bringing the school to its present state of improvement. Prior to the commencement of his labours, the schools of Fribourg, were in a state of great depression, without system, and inefficacious, with respect to morals; that Pere Girard's greatest efforts had been, to make the scholars thoroughly acquainted with their religious duties, to render them sober and industrious, in short, to inspire them with a taste and a love for all that belongs to an honourable character, in the respective stations which they are to fill. His success, in this respect, the whole town was ready to attest. The Lancasterian plan of instruction, came opportunely to his aid; but he was rather a "*Belliste*," than a "*Lancasterien*." The principle which he relies most upon, as an excitement to the energies of the boys, is emulation. This principle, properly directed, he is confident, does not produce envy, or any other injurious feeling. So anxious are the boys, in his school, to improve, they are known often to rise in the night to study; and so lively and interesting to them, has he rendered the exercises of the school, that very young children are fond of attending. A lady of distinction, (the ex-queen of Sweden,) visiting the school, observed a very young child in one of the classes. "*Pourquoi viens tu ici, mon enfant?*" said she, to the tiny scholar. "*Pour m'amuser,*" was the answer. Still more surprised, she asked, "*Comment? est-ce-que l'ecole t'amuse?*" "*Oh, Madame,*" said he, "*nous nous amusons ici tous les jours.*"* But, observed our learned informant, as there is always a struggle between light and darkness, so it was hardly to be expected, that Pere Girard's success, would not meet with

* "What dost thou come here for, my child?" "To amuse myself." "How—does the school amuse thee?" "Oh, Madam, we amuse ourselves here every day."

opposition. His school has acquired so much celebrity, that not a day passes without visitors. In short, it was to have a little time to write, that he has left the town for a few days. A public examination is held every three months, with a great deal of form, accompanied with music, and a distribution of prizes, to the most meritorious scholars. It is a kind of public spectacle, which gratifies the town. But the religious principles of the Pere, are too liberal for the zealous friends of the Romish Church, and the bell of alarm has been sounded, with notes of danger to the true faith. A division has taken place, and, in the present government of the canton, there is a majority of the disaffected. They accordingly determined, by a decision obtained last month, to reinstate the Jesuits in their college, in Fribourg; doubtless with a view to counteract the influence of Pere Girard; and it is probable that they would soon proceed to place his school, "hors de combat," were it not for the very strong popular support, which it receives. The government of this canton is patrician; or, in other words, aristocratical. To retain their power, is a darling object with the patricians; and they are so well aware that the diffusion of learning and morals will work against them, that when the corner stone of a new and commodious house, now erecting for Pere Girard's school, was laid by a committee, the Avoyer, or chief magistrate, happening to pass, he said to one near him, "Voila le tombeau des patriciens."* The only excitement to emulation, which Girard uses, is an advancement in the classes, medals, and prize books at the examinations. But it is his constant effort to preserve such a tone of moral feeling, as to operate itself as a stimulus to honourable effort, and, at the same time, to prevent the evil consequences of emulation. That a most favourable change has been produced in the moral habits of the children of Fribourg, is generally admitted.

Our conversation with the Chanoine, was very interesting to us. He is a man of superior intelligence, of a comely figure, and pleasing address. We parted at one o'clock, and, on observing to him that we should be glad to see his cabinet, (for our printed guide informed us he had one,) he desired us to call again at two; an invitation we did not fail to comply with.

He introduced us into a room, completely filled with books, minerals, birds, fish, fossils, and other objects of

* There is the tomb of the patricians.

natural history, arranged with great taste and effect. It was a very learned and neat little museum. His specimens of quartz crystals are uncommonly beautiful. He showed us a manuscript copy of the Bible, in illuminated letter, of very fine execution, and nearly four hundred years old. The whole collection does great credit to his industry, learning, and taste. His clerical dress, which he retained while we were with him, was neat and plain. We left him with sentiments of grateful respect, for the information he afforded us, and his cordial reception of strangers, without a formal introduction.

We next visited the hospital of Fribourg. It is a large building, occupying the four sides of a hollow square, in the centre of which is the chapel, a round building, having four court yards, one in each angle. We were conducted through the apartments, by the economist, or steward, (*l'économe*), with great politeness, though we had nothing to recommend us but our persons and tongues. There was nothing extraordinary in this institution; the absence of neatness and order was but too observable. We were shown one room full of beds, (course enough to be sure) destined for the accommodation of wayfaring men and travellers, who are not well provided with the means of paying for their fare. They call here, and sleep, receive a bowl of soup and a piece of bread, and then travel on. If taken sick, they are carefully nursed by the good sisters, who are the ministers of consolation in these establishments. The apartments for the insane were in miserable condition. A damp ground floor, cold rooms, a bundle of straw for a bed, and such a destitution of every thing cheering, that one is ready to suppose, that in these Catholic hospitals, the insane are considered as persons possessed of evil spirits, and fit only to be treated as subjects of his Satanic majesty. One room was appropriated to the *cretins*, or those who have some bodily or mental deformity, arising from hereditary or natural causes. These cases are often, though not always, accompanied by goitre. In the general hospital there were about forty patients, beside children, and eight insane.

Our young guide (*garçon de place*) next introduced us to the Jesuit's convent; a very large building, with spacious corridors, and numerous rooms for the members or *pères*. Thirty of these are to be reinstated in this their ancient habitation; but few of them are yet arrived. When pre-

pared, they are to open their schools, and provide for the instruction of 200 scholars. One of the young professors showed us the library. It is extensive, and contains some costly and valuable works ; but it is, of course, very deficient in modern publications. Its arrangement is classical, and convenient. Wo to Pere Girard, when these thirty champions open the field against him !

10th month, 1st. We rose by candle light, and prepared for our departure—my companions in a char-a-banc, and myself in the diligence. As soon as the day dawned, we saw a number of persons resorting to the church, to hear mass. By far the greater portion were females.

Fribourg contains about 6000 inhabitants, and is romantically situated on the Sarine, which empties into the Aar. The shore of the river is a bold rock of sand stone, on which the houses are built, at a great elevation above the water. The town is remarkably well watered, there being no less than twenty-eight public fountains, from the greater number of which a stream of pure and excellent water is constantly flowing. In crossing a public square, in the centre of the upper town, we were struck by the appearance of a tree of extraordinary size and venerable aspect. It is a linden tree, (*tilia*), and was planted, if the record be true, in commemoration of the battle of Moret, on the 20th of June, 1475. It begins to lose its vigour, and to exhibit marks of decay. The cathedral of this town is a very ancient building, founded in 1283. The tower is considered as the highest in Switzerland, being 356 feet, French, equal to 379 English. The French language is spoken in the higher parts of the town, and the German in the lower, while in the central portions the two languages are confounded.

The country between Fribourg and Berne (six leagues) contains much wood, consisting mostly of tall and straight firs. The farms were in excellent cultivation, producing grass in apparent abundance.

The entrance to Berne is extremely pleasant. On pedestals, one on each side of the gate of the town, are placed enormous statues of white bears, this animal being the symbolic representation of the town, and occupying the centre of its coat of arms. The peculiarity of the female costume of this canton appeared as soon as we entered its limits. It consists of a small velvet cap, which fits closely to the back part of the head, and to which is attached a border of six or seven inches wide, made of horse hair, woven into a kind

of net or gauze, and which spreads out almost perpendicularly to the head. The hair is plaited in two long queues, which hang down to the waist, interwoven with ribands attached to the back part of the cap. This dress gives to the upper part of the body an appearance altogether ludicrous to one who sees it for the first time ; yet it is the general style of ornamenting the head throughout the canton, from children of nine years of age to married women, and from the labourers in the field to the lady in town. The arms of the women are generally covered with white linen or muslin sleeves, very wide, and gathered round the arm near the wrist. Among the lower classes, in warm weather, the sleeves of their chemises are made to answer the demands of the fashion. The women are busy at all kinds of out door work ; breaking hemp with an instrument exactly similar to that used with us for flax ; driving oxen ; spreading manure, and other labours of an equally masculine character. I noticed many of them at these employments, neatly dressed in their bonnets and white sleeves. We found, at the Fauçon Inn, an excellent table d'hôte, and good accommodations.

We called in the afternoon on Dr. Wytttenbach, for whom I had a letter, from Professor Pictet of Geneva. He is one of the German clergymen of the place, seventy years age, of a most engaging and agreeable physiognomy, and a venerable figure. He met us, equipped in his ministerials, and with an address expressive of great benevolence, said he was just going to church, to deliver a prayer, which would occupy him only "un petit quart d'heure," and if we would amuse ourselves till that time, he would be glad to meet us. We took a walk, and on calling again, were introduced into his cabinet, which contained a variety of objects of curiosity. He went with us to the public library ; containing a suite of rooms, and a collection of books, superior, in point of taste and beauty, to any I have seen on the continent. He afterwards introduced us to the rooms of natural history in the same building, consisting of three apartments, and containing a very interesting cabinet of the minerals, birds, and quadrupeds, of Switzerland ; with a considerable number of articles from other countries, several large models of the Swiss mountains, made by a young Bernois, a beautiful collection of birds' nests and eggs, numerous materials from the South sea islands, deposited here by Weber, who accompanied Captain Cook as his draughts-

man, and who was also a Bernois ; these and other things, were arranged in handsome style in the different apartments. Adjoining these rooms is a botanic garden ; not large, but well provided with the plants of the country, especially alpine. In the garden was a marble bust of the great Haller, who was a native of this town, and one of its principal magistrates. His remains are deposited in this garden. It was evident to us that this institution is an object of affection with Dr Wytttenbach, as being in some sort a child of his own raising, and in the nursing of which, he spends a good deal of his time. His conversation was full of pleasant anecdote and humour, and his manners were kind and affable. He satisfied us that he is a man of much learning, and of considerable science.*

2d. The hospital for the poor is a handsome building, occupying all the sides of a large square ; in the centre of which is a fine garden, with a fountain playing in the middle of it. The apartments in each story, open into a wide corridor, which extends all around the central area. The number of patients is about 120, but the buildings also afford accommodation, (i. e. a night's lodging and a meal or two.) to wayfaring poor. During the past year, as many as 10,000, thus found here a temporary shelter. The poor of Switzerland are no were supported by taxation. In the canton of Berne there are permanent funds for this purpose, kept up by donations and legacies, but none have a real demand upon this charity, but those who have the right of bourgeoisie, which, unless it be inherited, it is very difficult to obtain.

My companions visited likewise the general hospital, or infirmary, "a very handsome building, situated near the descent to the river Aar. The entrance is in the centre, which leads to a long gallery. The room where the faculty prescribe for their out patients, is a very neat one. The hospital contains about 115 beds. The lobbies are airy, but the wards are only arranged on one side of the hospital. What appears singular in the arrangement, is, that two wards are occupied by men, and the other by women, communicating by a door, without going into the gallery. There is a separate room for children with tinea capitis, and one for lying-in women, at one end of the building. Every thing appeared extremely clean and comfortable. Patients of a certain character, are not admitted here, there being

* Since deceased.

another house for them in the town. The bed stocks are of wood ; neat curtains, sometimes covering several beds, near together. Behind, is a very good walk for the patients, looking toward the river."

After getting our passports examined, by the Austrian minister, at Berne, and taking our dinners at the table d'hôte, we set off in a voiture provided by our landlord, for Hofwyl, two leagues from Berne, in order to visit the celebrated establishment, or "Institut d'éducation," of Emmanuel de Fellenberg. It was a rainy day. We passed through a pretty large wood, and arrived at Hofwyl, about 4 o'clock. I was introduced to Fellenberg, by three letters ; two from Paris, and one from Geneva. The visitors that resort here are so numerous, and the attention of the principal so much taken up with them, I had been advised to anticipate some difficulty in getting access to him. On presenting myself at the door, I was received by a young man, who appeared to be his clerk, and who, introducing me into the office, requested me to write my name and residence in a book which he gave me. He then announced me to Fellenberg, who politely invited me into the parlour. I produced my letters, which appeared to give him much satisfaction. He is a man of middle age, of a mild and agreeable countenance, and of polite and genteel manners. He seated me on a sofa, and entered upon an explanation of the principles of his establishment, and the particular views of education, which had induced him to engage in it. He considers society as divisible into three distinct parts ; the higher, (comprehending the noble and the wealthy,) the middling, and the poor. The greatest defects of education, he supposes to exist in the two extreme classes, and that, these distinctions or classes among men, would always prevail, in every civilized country, he believed to be incontrovertible ; and, of course, any attempt to break down the distinction, would be fruitless. It is, therefore, of consequence that they should be each educated in a manner conformable to their situations, but in such a way, as to develope, to the highest extent, the best faculties of their nature ; and, while it preserves the proper relation between them, it should, at the same time, encourage the feelings of kindness and sympathy on the one part, and of respect and love on the other. This, he thought, could be effected upon no plan, so effectually, as by bringing them up side by side, so that they should have each other constantly in view, without any necessity

whatever of mixing or associating. The rich, by observing the industry, the skill, and the importance of the labouring classes, would learn to entertain just sentiments respecting them, and the poor, by feeling and experiencing the kindly influence of the rich, would regard them as benefactors.

With respect to the best means of cultivating the faculties, which, in their due operation, are to promote the permanent happiness of men, he considers agriculture, as affording opportunities and advantages of the greatest importance, and next to this, the mechanic arts. Agreeably to these leading views, his establishment consists of two distinct parts; a boarding school of the sons of noblemen and gentlemen, in which no pains are spared, to provide them with teachers in every useful science; and of a school of boys, taken from the poorest class, who are clothed and fed in a very plain, coarse, and farmer like style, and who work diligently in the fields, at employments adapted to their strength and skill. During two hours in the day in summer, and more in winter, these boys are instructed in letters, and in music. They are likewise introduced into the workshops, and taught the business of a blacksmith, a carpenter, a wheelwright, a cabinet maker, a turner, a shoemaker, or a worker in brass, according as a particular talent for any of these, may manifest itself. The produce of the labour of these boys, bears no inconsiderable proportion of the expense of their maintenance and instruction.

After this brief explanation of his principles, Fellenberg introduced my companions and myself, to Count Louis de Villevielle, a gentleman from the South of France, who, reduced by the revolution, has attached himself to Fellenberg, and appears to live with him, as a sort of companion. He attends to strangers, and goes with them through the grounds, shops, &c., of the establishment. He proved to be a very sensible, well informed man, and altogether disposed to satisfy our inquiries. He conducted us to the workshops. In one of them, a fire engine, of a large size, had just been completed in a style of execution which would do credit to London or New-York. In these shops, all the instruments of agriculture are made, and it is the constant aim of the principal, to improve upon the form and structure of them, and to invent others which experience may indicate the use of. As they make more than the farm requires, the surplus is sold to the neighbours.

In the evening the Count conducted us to the farmhouse,

where the class of the poor boys are lodged, fed, and instructed. We found them at supper, on a kind of hasty-pudding, with whey and boiled potatoes. They breakfast on a piece of bread and an apple or something as simple, and dine between eleven and twelve, on vegetable food alone. Once a week only, (on first day,) they have meat and wine. They are thus taught a lesson of simplicity, with respect to their manner of living. The furniture of the house corresponds with the dress and clothing of the boys. After supper they went up stairs to the school-room, to take a lesson in music. Their teacher (Vehrly) is a young man of very extraordinary qualifications. He received his early education from his father, who filled, in a distinguished manner, the office of schoolmaster for thirty years. He began at an early age to assist his parent in the discharge of his office. On coming to reside with Fellenberg, his views were farther expanded, and he entered with enthusiasm into the concerns of the establishment, and willingly undertook the formation and direction of the class of the poor, in all their exercises, agricultural, literary, scientific, and moral. He lives with them, eats, sleeps, and works with them, dresses as they do, and makes himself their friend and companion, as well as their instructor. He is eminently fitted for such an occupation by his genius, his address, his temper and disposition, and above all, by his religious principles. The school room serves also for a shoemaker's shop, and probably accommodates, occasionally, the taylor and harness maker. The boys always take a lesson of one hour, between supper and bed. This lesson is frequently confined to music. They are taught it by principles, but they use no instrument but their vocal organs. Fellenberg lays great stress on music, as a means of bringing the mind and heart into harmony with truth, and of inspiring the mild and benevolent affections. He thinks it has been very beneficial in reclaiming many of these boys, from the vicious habits they had acquired from the low and exposed lives they had been subject to. By teaching them to sing religious songs, together with those that are simply patriotic, he says their attention is diverted from those vile ballads which are common among low bred people; and that they find, in this new entertainment, a happy substitute for the coarse and vulgar expressions to which they were addicted. The boys of this class appeared to be very healthy and contented. They are taught to pay

the utmost attention to cleanliness. Their clothing in summer, is of coarse cotton, and in winter, of woollen cloth. They go barefooted, except when they work in the fields, or when the state of the weather requires them to wear shoes and stockings; but their heads always remain uncovered. Many of them, as might naturally be supposed, enter the school with the seeds of scrophulous disorders; but, by the effect of a simple and wholesome diet, cleanliness, and labour, they are restored to health with scarcely any medicine. Some of them, on their entrance, are feeble and debilitated, unable to endure cold, heat, or labour; but when once they had become accustomed to the regimen of the school, they willingly encounter rain, storms, and severe cold, whenever their work calls them abroad, without shrinking from, or regarding the exposure. They are taught to mend their own clothes. In summer they rise at five, and in winter at six; and after having dressed themselves and said their prayers, they receive instruction for an hour. They then breakfast, after which they go to work until half past eleven. They have then half an hour for dinner; after which Vehrly gives them a lesson of one hour. They work out till six, and after eating their supper, receive farther instruction, which concludes with prayer, and they are generally in bed between eight and nine o'clock. But this distribution of time varies according to the seasons. In winter five or six hours a day are devoted to sedentary instruction. The morning of the first day of the week, is always devoted to exercises of piety, and after dinner some hours are given to instruction in sacred history. But their lessons are by no means confined to the school room. Vehrly takes pleasure in questioning them on subjects of natural history, geography, religion, morals, or any other useful topic, while they are at work in the fields or shops; and it may readily be conceived, that, with this devotion to the improvement of his pupils, occasions will perpetually present themselves, of conveying instruction in every kind of knowledge, calculated to expand the minds of children, and to cultivate their best affections.

With regard to the most effective means of eliciting the powers of the mind, and of conducting the literary exercises of young people, great credit is due to Pestalozzi, whose veteran labours, as one of the most enlightened teachers of the age, were well known and acknowledged long be-

fore the commencement of the Hofwyl Institution. His plans of communicating knowledge, are in a great measure practised by Vehrly. Much pains are taken to impress on the minds of the pupils, a deep sense of the importance of time, and of habits of industry ; and from the reports that have been published by commissioners appointed to examine the establishment, it is evident that the most favourable results have attended these endeavours. The children are so effectually redeemed from their former vicious habits, that, in their most free and noisy sports, not an expression is heard offensive to innocence or good manners. After working ten hours in the day, they give themselves up, when their teacher permits, to the liveliest recreation ; but a word from Vehrly, is sufficient to induce them to leave their sport and to engage in some other exercise. The progress which they make in knowledge, is truly surprising, when it is considered how adverse their former habits have been to all intellectual abstraction. In a few years, or even in less time, they learn to read, write, and calculate, with and without the use of pencil or pen ; the elements of drawing become familiar to them ; and they acquire good notions of geometry, especially in its relation to field surveying, and its application to descriptive drawing. Botany and mineralogy constitute part of their amusements. They become well acquainted with all the plants of Hofwyl, and their different qualities, both the salutary and noxious. Of the minerals also, they acquire the names and principal uses, and they make collections of all that is valuable and curious in minerals and vegetables. Some of them are very attentive to the arrangement of their little cabinets. The principal, when walking with them in the fields, is often called upon to decide disputes relative to the nature of stones or vegetables. But the most admirable trait in the character of this school, is the tone of religious feeling which, it is said, pervades it. This could not be accomplished, were not Fellenberg and Vehrly, both strongly imbued with a sense of religious obligation, and unremittingly attentive to awaken those sentiments in the minds of the pupils. They have learned by heart more than fifty hymns, and many portions of sacred history. They are regularly attentive to one practice, which is a pleasing source of instruction, and at the same time serves to demonstrate the progress they have made in useful acquirements. At the close of every week, they write, in a book, provided for the purpose, an account

of whatever has impressed their minds with the greatest force. It may be either a moral reflection, a description of a plant, or an instrument, an account of a conversation, or an extract from some thing they have read. We saw some of these journals; they were mostly in the German language, and the greater number were written with remarkable neatness. Some of them contained drawings that evinced no inconsiderable skill, and an eye accustomed to accuracy of observation.

It will readily be conceived that a plan of instruction so admirable, and constantly directed to the best and purest affections of the mind and heart, can scarcely fail to redeem from indolence and vice, those whose habits have been the most degraded. And it has accordingly happened, that, notwithstanding the boys under Vehrly's charge have been taken from the very lowest ranks, and some of them the children of beggars, but one instance has occurred, of such inveterate vice, as to render it eventually necessary to abandon the culprit to his corrupt propensities, and expel him from the school.

In the religious exercises, which take place on the first day of the week, the boys of the poor school assemble with the superior class, but on no other occasion.

After seeing the evening exercise of these boys, we retired to an inn, at the village of Buchsee, about a quarter of a mile from Hofwyl. This was only a village inn, but we found in it good beds, and good attention.

3d. After breakfast, we repaired again to Hofwyl, and were conducted by the count, first, to the place where the agricultural instruments are deposited. The drill, or machine for sowing seeds of various kinds, by which one half the seed is said to be saved, has been improved by Fellenberg. The *exterminator*, for destroying weeds, and the *scarificator*, for paring the soil, were among the things in this collection: but I was surprised, when Fellenberg, in reply to my questions, informed me, that no attempts had been made to improve the common plough. That which appears to be in universal practice in Switzerland, is probably the same used by the great grandfathers of the present race, and is much more awkward and clumsy than the English plough. The mould-board is only a flat plank placed at an angle with the beam. This plank is often changed to the other side of the plough, at each end of the field, so as to throw the furrow always in one direction, but

for what reason it is difficult to imagine, except, on the side of a steep hill, there may be some advantage in casting the furrows downward. But, as these ploughs are constructed, I am persuaded, it requires nearly or quite double the team, to perform a given quantity of labour as in America. I noticed in the yard, a new sleigh, designed to hold about eighty persons, and to be drawn by fourteen horses. This is intended for the amusement of the higher class of boys. The snow is often very deep in this part of Switzerland, and continues some months. The stables exhibited a collection of the largest cows I ever saw. They are kept to the stalls all the year, and are fed with grass in the summer. The greatest care is taken to economise the manure. The yard, which receives the litter, is made concave, and has a well in its centre, whence water is thrown over it in dry weather. A large reservoir, lined with stone, receives the wash of the stables, which is from time to time, thrown over the contents of the yard. The cows were mostly fat enough for good beef. They seldom give more than twenty-four bottles in a day, and, upon an average, not more than sixteen bottles, or about twelve quarts. We were next conducted over part of the farm. It consists, in the whole, of 240 acres, and certainly affords a neat specimen of agricultural skill. We were shown the garden and play ground of the upper school, and the fixtures for their gymnastic exercises, &c. Among the latter, throwing the lance is practised. They aim, from a given distance, at a post, the top of which is loosely attached by hinges, on the remote side, and the lancers endeavour to strike with sufficient force to overturn it. Each of them has a portion of garden ground assigned to him, which he cultivates as his own; while a more extensive enclosure belongs to them in common, in the labour of which they are governed by rules, adopted by themselves. They have their choice also of the mechanic arts, facilitated by the numerous workshops on the premises.

Although the building, in which Fellenberg accommodates his superior class, is large, he is erecting two others. One of these is for the dwelling-house and school-rooms of the students. It is about 100 feet long, and sixty wide, and will contain wine cellars, a chapel, ample dormitories, refectory, &c. for more pupils than his present number. The other building is for a riding-school below, and dancing and exercise rooms above. This building, which is also large, is constructed like many (if not most) of the

country houses of Switzerland, by erecting an open and strong frame of wood, and filling the interstices with a mixture of clay and straw. This is moulded by the hand, into oblong portions, which are laid upon sticks, and are forced down in grooves made in the posts of the frame. The mortar is wrapped round the stick, so as to cover it ; another is then forced down, &c. This wall is afterward plaistered and white washed.

The Hofwyl establishment, as I have before remarked, consists of two classes, the rich and the poor.

The class of the rich contains at present about eighty. Twenty of these, consisting of children under ten years of age, are placed under the care of a respectable gentleman and his wife, in a house belonging to Fellenberg, situated about a mile from his own residence. A teacher or two have the charge of their instruction, both in and out of the house. From this house and ground we had a magnificent view of the eastern Alps. The elevation of some of the summits in this range, is but little less than that of Mount Blanc ; and the extent of the chain covered with snow, was much greater than any I had seen. The air was very clear, exhibiting the rich white of this stupendous ridge of mountains, in the finest style imaginable.

The other sixty, constituting the most prominent part of the Hofwyl institution, are provided with more than twenty teachers, or professors. Among the pupils, are several princes, and the sons of ministers of state, &c. The price of board and tuition varies from £100 to £300 sterling, per annum. We were not admitted to the interior of the building occupied by these students. We saw none of the performances of their schools, or their exercises, except a little riding on horseback, on saddles without stirrups ; the horses trotting in a circle, guided by a rope held by a boy in the centre ; the professor standing, likewise, in the middle, and directing the rider how to sit. In this exclusion from the interior of his school, we were treated, by Fellenberg, like most, if not all, of his visitors. None are invited to the exercises, and none, of course, would go in without invitation. Either the trouble and distraction which the general admission of his numerous visitors would occasion, oblige him to adopt this course ; or, there is not, in the classification and operations of his school, enough of refinement, talent, and perfection, to support the name, and to correspond with the character of eminence he has suc-

ceeded in obtaining. My own impression is, that both these causes operate in producing his decision. The daily, and almost hourly, attendance and interference of company, would certainly be extremely troublesome. He does not profess either to have adopted any plan by which his pupils are rapidly brought forward. His system, as he explained it to me, is even opposed to a hasty progress. He wishes to allow his plants to arrive at full and vigorous growth, by a slow, cautious, and well-directed training, and by carefully removing from the soil every obstruction; rather than urge them by a hot-bed culture. He justly thinks, that all he can do, is to lay a solid foundation; that education is, or ought to be, the business of a whole life. Moral and religious principles, he regards as the basis of all that is excellent in man; and accordingly, great pains are taken to inculcate the doctrines of Christianity, agreeably to the profession of the parents and guardians of the pupils. The Catholic scholars have a clergyman or professor of their own sect, and the emperor Alexander has provided for the instruction of the Russian pupils, in the principles of the Greek church. Fellenberg's character, as a man of principle and piety, is, I believe, decidedly in his favour. He has the manners of a gentleman, and the whole exterior of his establishment, bears the marks of considerable taste and judgment. Besides the three schools already mentioned, he has another about half a mile from Hofwyl, where young men attend, during the winter, to courses of instruction in those subjects which relate to agriculture, and he lectures himself, I believe, on the practical operations of farming. It is here too that the professor of chemistry has his laboratory and lecture room. We were introduced to him, (Dr. Strobe,) and judged him to be a good chemist. He is also the physician of the establishment, and his laboratory indicates an attachment to his profession, and judgment in its practical details. The philosophical apparatus is, however, unworthy of the institution, and ought not, I should hope, to be taken as a sample of the whole interior. In taking leave of Fellenberg, he expressed much regret at the shortness of our stay, and the consequent want of more opportunities of conversation. I cannot but regard him as a man of more than mediocrity of talent; a man of penetration and judgment; but rather prone, perhaps, like other German philosophers, to theorise on human nature, and to fancy that new and important discoveries are yet to be made in the principles of human action.

From the information we received from others, as well as from the statements of Fellenberg himself, it is evident that his plans have ever been regarded with jealousy by a great number of his most influential neighbours and fellow-countrymen. He was at first condemned as a visionary : but when he had fairly demonstrated the practicability and utility of his schemes for the improvement of education, they accused him of sinister views ; and alleged against him, that his motives were mercenary, having an eye chiefly to the profits of the establishment. This narrow minded spirit has not been content with mere expressions of disapprobation and condemnation. The government of the canton has gone so far as to lay positive obstructions in his way, and to threaten him with the weight of their aristocratical authority. He had a few years ago devised a plan for diffusing some of the benefits of his experience in the government of youth, throughout the canton. He invited the teachers of schools to repair to Hofwyl during the period of their vacation, and there to avail themselves of such information, as the institution would afford, and their time would admit of. This offer was gladly accepted ; but the next season the teachers of the canton were most arbitrarily interdicted by the government from resorting to Hofwyl. Fellenberg, thus very ungenerously thwarted in his wishes to do good, opened his establishment for the benefit of other cantons, and has thus had it in his power to extend still more widely the advantages of his system.* His great desire is to introduce a taste for agricultural pursuits, connected with an amelioration of the indigent classes.† He is himself of a patrician family ; and his haughty compeers do not relish what they foolishly consider as a diminution of the dignity of their order, by his resorting to the task of an instructor. But though the Bernese government is thus actuated by ignoble sentiments toward the Hofwyl establishment, the most distinguished and enlightened characters in other parts of Switzerland, are decidedly in its favour. At Geneva it is considered as an honour to Switzerland ; and if we may judge from the patronage that its founder has received from other countries ; from England, Scotland, Germany, Russia, &c. it may be inferred that the Fellenberg system of instruction,

* This part of the institution, which he called the *Normal School*, has been entirely prohibited by the cantonal government.

† His farm is intended to serve as a *model* of the best course of cultivation and management. About one twentieth of it is devoted to experimental inquiries, and the results are gradually adopted in his practice.

is highly approved by the most competent judges of real merit in Europe.*

Without attempting to justify ALL the views which have influenced the founder of the Hofwyl institution, either as it regards its general arrangement of distinct and independent classes, or its minute practical details, I have no hesitation in saying, that, from all that I have read, and all that I have seen of this establishment, it does appear to me to be conducted upon principles which are calculated to afford the very best kind of education which it is possible to confer upon a young man, whatever may be the situation which he is to fill in active life. As it regards the poor, it is difficult to conceive how they could be brought up in a way which would better prepare them for filling the station of industrious, skilful and intelligent labourers. With respect to the rich, while they are cheerfully pursuing an excellent course of literary and scientific instruction, they are effectually preserved, by the principles of this institution, from those idle and vicious habits which so commonly result from the vacant time of colleges and universities. By turning their attention to agriculture and the mechanic arts ; by inspiring

* By the latest information in my possession, the superior class consisted of nearly 100 pupils, taught by upward of thirty professors : The course of instruction embraces the Greek, Latin, German, and French languages and literature ; history, civil and sacred ; geography ; mathematics, pure and mixed ; natural and mental philosophy ; chemistry ; music ; drawing ; gymnastics, including riding, swimming, dancing, &c. ; natural history in all its branches ; and religious instruction.

The pupils rise at six in winter and five in summer ; they breakfast at seven, eat a little at ten, dine at noon, take a luncheon at five, and sup at eight. Five hours are appropriated to study in the forenoon and four hours in the afternoon ; the rest of the day being devoted to their gymnastic, agricultural, and mechanical exercises. This arrangement, however, is not absolutely restrictive, but is made to conform to the varying circumstances of the establishment, the health and genius of the pupils, &c. The greatest pains are taken to cultivate their moral and religious sensibilities. The language chiefly spoken is the German. The internal or civil government, (if it may be so called,) of the school, is regulated by a constitution and by-laws, administered by the pupils themselves, and for which object they have their legislative and executive officers, under the supervision of the principal. The motives of emulation, as they are ordinarily excited by rewards, medals, honours, &c. or by a division into classes in the numerical order of first, second, third, &c. form no part of the Fellenberg system. His aim is to address his instructions to the more reasonable and noble principles of their nature, and by the number of his professors, (for he has had as many as thirty-five with less than 100 pupils,) to unite all the advantages of private, with those of public instruction.

It appears from a recent and very interesting exposition of the Hofwyl institution, by the count de Villeveille, that the principal of that establishment began his enterprise with a fortune of 400,000 francs, (nearly \$80,000,) and that, by a prudent economy in his expenditures and management, he has, in the course of twenty-two years, more than doubled his original capital, notwithstanding the constant maintenance of forty poor boys, and his liberal provision for those of the higher class.

Such is the attraction which Hofwyl now presents to the enlightened curiosity of travellers in Switzerland, the number which daily visit the institution during the travelling season, cannot be estimated at less than twelve or fifteen. Of this number, it is scarcely possible that De Fellenberg, intensely occupied as he must be with his extensive concerns, can have time to see and converse with more than one. It is in consequence of the concourse of visitors, that so few are admitted to the interior of the school ; for it would be an injustice to the parents, if, instead of devoting himself to the interests of their children, he should offer them as a daily and almost hourly spectacle to visitors.

them with a love of labour, or at least of a useful application of their strength and muscular activities ; by exercising their ingenuity in the use of tools and instruments ; by familiarizing them to an attentive observance of nature in her different kingdoms, and in the revolution of seasons,—a foundation is laid for those more expanded feelings and generous sympathies, which bind the upper to the lower classes of the community, and eventually tend to exalt the condition of humanity.

But the greatest recommendation of the Pestalozzian and Fellenberg plan of education, is the moral charm which is diffused throughout all its operations. It cannot but happen, (all other things being equal,) that pupils thus educated, will become not only more intelligent men and better philosophers, but also more moral and dignified members of society. I cannot but cherish the hope, that this scheme of education, of combining agricultural and mechanical, with literary and scientific instruction, will be speedily and extensively adopted in the United States. I am aware that it would have to contend with serious difficulties. The prejudices and habits of the people would be against it. The high notions of independence, so early imbibed and strongly cherished among us, would submit, in all probability, with an ill grace to the alternation of labour with the exercises of a school. The pulse of the nation has already been felt on this subject by a benevolent individual, (W. Maclure,) who, having visited the institutions of Pestalozzi and Fellenberg, was resolved, if possible, to establish one or more schools in the United States on a similar plan. But after travelling from New-York to lake Erie, he could find no one who would agree to second his views ; none who did not consider the plan, as either unnecessary or impracticable. Thus discouraged he relinquished the project, though few persons in the world, would have supported it by greater pecuniary sacrifices. Still I cannot but believe, that, if it were once introduced and brought fairly into operation, its superiority would be immediately manifest, and that the first successful example would be rapidly followed in different parts of the country. I have but little doubt, that on a good productive farm, of 250 or 300 acres, provided with suitable buildings, (which need not be very costly,) and well stocked, a school of twenty-five or thirty boys, conducted on the plan of Fellenberg's poor school, would maintain itself, and leave a gain in favour of the proprietor. A few

such schools would soon impart, to a large and populous district of country, a moral tone of incalculable importance to its highest interests and welfare. I know of no means by which a benevolent and wealthy individual could do so much good, at the same expense, as by erecting one or more such institutions, in any of our middle states. If white children could not at once be obtained to begin with, I would take the children of coloured people. These could be procured at a suitable age, and taken on indentures to remain a certain number of years, or until they were of age, if it should be found requisite, as in some cases it might be. Such an experiment, with persons of this description, would be highly interesting. It would put to flight the ridiculous theory of those who contend for an organic inferiority on the part of the blacks. It would in time produce examples very beneficial to our black population; and in reference to the scheme of colonization, now becoming popular, it might prove extremely important, by furnishing individuals admirably qualified by education; habits, and morals to aid in the management of an infant colony. The great difficulty would be, either in America, or any where else, in finding persons qualified to conduct such schools. Such characters as Vehrly, are rare. Without a deep sense of religion, united with the proper intellectual endowments, on the part of the teacher, the scheme could not prosper. Its basis is the mild, but fervent spirit of Christian love. It is, however, the happy nature of such a temper, to beget its own likeness in the hearts of others; and it might reasonably be presumed, that one successful example, would readily prepare the way for others.

We could not part with the count de Villevielle, without feeling and acknowledging his indefatigable attentions. He is strongly impressed with the superiority of the Hofwyl system. "In other places," he observed to us, "*instruction* is the end, and *education* is only secondary. At Hofwyl, *education* is the end, and *instruction* is regarded only as the means of attaining it."

4th. The morning being fine we concluded to walk to Berne, and engaged a man to carry our parcels and serve as a guide; for there is a foot way much nearer than that by which we came. On leaving the inn, the landlord, his wife, and the chambermaid, all pressed forward to take us by the hand, and to express their thanks. It was a mark

of honest simplicity, as agreeable, as it would be rare in almost any other country than Switzerland.

The path led through a beautiful forest of old oaks, beyond which was a grove or wood of fir trees. At the village of Reichenbach, on the river Aar, my companions diverged from the straight path, to visit a hospital for incurables, and another for insane patients, which are situated near each other, and at some distance from the town. They found the former in pretty good condition ; but the insane appeared to be very much neglected, or at least treated upon the old plan of exclusive confinement in dirty and dark rooms, and on coarse and hard fare ; consigned, in short, to irremediable wretchedness. I followed the guide directly to Berne. We crossed the Aar (a rapid river,) in a scow similar to those used with us. It was managed, however, so as to require no rowing to transfer it from one side of the river to the other. One end of it was fastened, by a long rope, to the middle of another rope, firmly stretched across the river, and attached to a high support on each side. The scow thus prevented from moving down the stream, was placed obliquely to the current, by a large oar, used as a sculler or rudder ; and being maintained in that position, was soon carried across, by the action of the current against the oar held firmly in its place.

The entrance to Berne, was along a public promenade, extending a mile beyond the town, on a high bank of the river, whence the eye, in addition to the charmingly cultivated fields and gardens of the immediate landscape, and the combined richness of city and country, comprehended within its grasp, a sublimely extended ridge of Alpine grandeur, bleached by the snows of a perennial winter. Great pains appear to be taken, to preserve this promenade in the best order. The faubourgs, or outskirts of Berne, are truly remarkable for beautiful walks. The river Aar, winds round the town, in a deep glen, the high banks of which have a rapid slope, but covered with fine verdure, and kept smooth, either by the scythe, or by grazing sheep. Wood is brought down the river, by the side next the mountain, and corded in long piles on its border. The town itself is neat and well built ; and, in one respect, differs from any that I have seen. On each side of the streets, (which are mostly of an agreeable width,) are arcades, under which the passengers walk, perfectly sheltered from the weather,

and the sun. These arcades are formed by the recession of the first story of the house, about ten feet from the street; the front wall, of the upper story, being supported by columns and arches. The shops open into the arcades, and benches, or tables, are frequently placed under the front arches, on which goods are exposed for sale. The passenger has thus, on each side of him, wherewith to attract his attention, and to tempt his purse.

5th. The inn, at which we have lodged in Berne, is in reality one of the best I have ever been at. The chamber in which we were accommodated, is large and elegant. They make up between forty and fifty beds, besides those for servants. The prices were about the same as at Geneva; two francs for breakfast, the same for tea and for lodging, and three for dinner.

We hired a voiture to take us to Neuchatel, distant nine leagues. The day was wet, but the scenery, in many places, compensated for the want of good weather. Arberg, a village on the Aar, where we stopped to feed the horses, and dine, had nothing to recommend it. We crossed the river, on a covered wooden bridge: from an eminence, which we gained some time before, the lake of Bienne presented itself to our view, and in it the island of St. Pierre, and on this island the house which was so long the abode of Jean Jaques Rousseau. This was the place which he chose as a retreat, from a world which he disliked; but which he did not contribute much, I think, to mend. The eye of a misanthropist, is a very miserable, distorting kind of telescope; and a heart that does not glow with the love of God and man, will serve as a very poor and delusive guide, for the head of a reformer. The spot which Rousseau chose for his residence, has enough of the romantic around it, to suit even his fastidious mind, and he has accordingly described it in his usual strain of luxuriant colouring.

On the borders of the lake of Neuchatel, the people were busy at the vintage; the whole slope on the lake being covered with vines. The period of gathering, is a season of great hilarity. Male and female are employed in the pleasing task of cutting and collecting the grapes, and they engage in this task in large companies, and are much disposed to be merry with each other, and with passengers. A traveller can scarcely expect to pass such a company, without a salutation of some sort, and, as we found to-day, the number of female voices will probably exceed that of

the men. The grapes are collected by the vintagers in small wooden tubs, and thence transferred to a large oval tub, carried on the back of a man through the vineyard, who, in his turn, discharges them into still larger wooden vessels, which are placed by the side of the field, or in the road. In these last vessels, the grapes are pounded with a coarse wooden dasher, which reduces them to a semi-fluid mass, so that they can be easily measured. These tubs are then conveyed to the press, the liquor strained off, and the residue of the broken grapes is subjected to the action of a screw press, in the same way as ground apples are treated in the cyder press. The new wine is put into large casks, for fermentation, whence it is drawn into smaller vessels, for transportation or use.

At the outlet of the lake of Neuchatel, we passed through the village of St. Blaise. Between this and the town of Neuchatel, the vineyards are very productive. We arrived at the latter place about sundown, and took rooms at the Faucon. We had no letters to this town, but Professor Pictet had given me simply the names of two persons here, the one a minister of religion, and the other the secretary of the government. With this slight credential, I ventured to take a guide, and directed him to conduct me to the house of the latter. On meeting the Secretary, I stated my case, and apologised for the liberty of calling on him, without an introduction. He immediately offered to assist me in any way in his power, invited me into the parlour, and seated me at the tea table, beside his wife. He proved to be a man of sound understanding, and of mild agreeable manners. As he was deeply engaged in the concerns of the vintage, he referred me to a captain Courant, who was also at the table, as an excellent guide, to such places in the town as we wished to visit. The captain offered his services very politely. This gentleman, I soon found, was a British officer, though a native of Neuchatel. He had been eleven years in the British service, and spoke English, of course, like an Englishman. He engaged to call upon me in the morning; and at the same time, the Secretary Montmollin, offered to furnish me with letters of introduction, to the two next towns we purposed to visit. I told him, that before he went thus far, I ought at least to convince him I was the person I pretended to be, and took out of my pocket, two letters of general recommendation, I had brought from home, one from the Governor of New-York, and the other from the

French Minister in the United States. He politely returned them to me, unopened, and said there was no occasion for them. On these very friendly terms I took leave of the family, after being treated to some excellent grapes, both white and black, fresh from the vineyard.

6th. Captain Courant called at eight, and conducted us to a hospital, built, about seven years ago, by a rich citizen of Neuchâtel, of the name of Pourtales, at his own expense, for the benefit of the wounded and sick of the whole country, except the poor of the town, who are provided for in another institution. The captain contrived to introduce us while the physician was in attendance. With this gentleman, Dr. Castella, we were particularly pleased. He holds a high rank as a physician in the town, and, as it appeared to us very deservedly. The building, the wards, the kitchen, the refectory, &c. of this hospital, are models of neatness and simplicity. It contains about thirty beds, the stocks of which are of wrought iron, and very light; the head-piece being made to slip into openings in the horizontal frame, so as to take off occasionally, for the convenience of removing the bed, or of performing an operation. The curtains are suspended from an iron frame projecting from the wall, immediately over the bed. The patients in this hospital cost, upon an average, about fifteen batz, equal to forty cents per day. Dr. C. showed us his pharmacopœia for the hospital. He relies very much on simples. The sick are attended altogether by the sisters of charity from Besançon, in France. They are nurses, cooks, maids, and even apothecaries. Who can question the sincerity or uprightness of the motives which can so operate upon beautiful and interesting females, as to induce them to withdraw from the world, and devote their days and nights to the alleviation of human misery, even in some of its most disgusting forms? The chapel of "Hôpital Pourtales" is adapted both to Protestants and Catholics. When the former assemble in it, a curtain is drawn in front of the recess which contains the crucifix and its appendages. The benevolent founder of this neat and interesting charity, left, at his death, a generous fund for its support, and his sons, who are considered as among the wealthiest men in Switzerland, have since increased the amount. The town is also indebted to Pourtales for various other improvements, particularly a fine promenade on the lake, built at great expense. His fortune was made in trade.

The captain next conducted us to a wine press, belonging to Secretary Montmollin, where we tasted of the new wine as it ran from the press. It differs very little, either in appearance or taste (i. e. the white wine) from new cider, except that it is less palatable. Nor is the wine commonly drunk at table, more exhilarating than our cider. A bottle of it can be easily managed at a meal, by a person whose head is no stronger than mine ; but a bottle of good cider I have seldom ventured to drink at one sitting. The red wine requires to be slightly fermented in the tub before it is pressed, in order to give it a good colour and flavour, but the white wine does not require this process. From the press it is conveyed to the wine cellar, and deposited in wooden vessels that hold from nineteen to fifty thousand bottles. In the month of March it is raked off into casks, in which it is left till autumn, and then bottled. Among the vigneron there is, however, a dispute, as Montmollin informed me, relative to the advantage of letting the wine remain on the lees until it is bottled, or put into fresh casks. It is alleged by many, that the lees at the bottom serve to attract, more effectually, the fine particles which remain suspended in the wine, and which injure its beauty and flavour.

The town of Neuchatel contains about 4000 persons, and some of its houses are of princely size, with grounds corresponding. It is greatly indebted to two of its citizens, Pourtales, (of whom I have spoken) and Pury, who built a large town-house, for public business, and made a present of it to his fellow-citizens. Such evidences of generosity and public spirit afford the most delightful testimonials of the moral feeling which pervades the country. There are no people, perhaps, on the globe, more famous for their amor patriæ, than the Swiss ; and yet there are none who so readily hire themselves as soldiers to other nations, without regard to the cause in which they engage. This cannot surely be owing to any innate love of war and bloodshed, for the Swiss are naturally a mild and amiable, though high minded people. It must arise either from incidental and long established custom—or from the necessity of emigration, in consequence of a dense and over-crowded population. It is, however, a melancholy consideration, that any one nation of professing Christians should be such habitual encouragers of war, as to engage in it in cases in which they have no immediate interest. As a national

trait, this cannot but be regarded, I should suppose, by every serious and enlightened member of the Swiss confederacy, as a great blemish in the character of the country. How much of this error might be remedied by education. If the children of the country were taught to regard wars and fightings in the light in which they are placed by the whole letter and spirit of the New Testament; by every precept of the Saviour, and every injunction of his disciples and apostles, how small would be the number of those that would embark in war, merely as a profession, and risk their lives and happiness in the quarrels of others, only for the sake of gaining a living!

Being provided with two letters from Montmollin, and one from Captain Courant, we departed, at eleven o'clock, an excursion to two towns situated at a great elevation on Mount Jura. The day was very wet, but this did not prevent us from enjoying the sublime scenery, and surprising evidences of industry, which this excursion afforded. The road was an almost continual ascent, for four leagues. At the end of about three hours, we crossed a valley, six miles long, and three wide, which contains twenty-two villages! At one of these (Fontaine Melon) we stopped, and were introduced by one of our letters, to M. Banqueret, a manufacturer of the coarser parts of watch-work. He took us through his shops, in which about 150 persons are employed in making the wheels, springs, and other parts of watches, which they effect almost entirely by machinery. We saw the operation, from the cutting of the brass out of thick sheets, and rolling it by a horse power, to the fashioning of some of the smallest wheels, the fusees, cutting the teeth, &c. This single factory, I should suppose, could supply these materials in sufficient quantity for one half the United States.

We continued our journey, through a heavy rain, farther up the mountain, and arrived about four at Chaux-de-Fond. This is a town which has sprung up within a short period. Most of the houses are built of stone, and many of them are three and four stories high, and of a proportionate width. It is situated at the head of a valley, near the top of the mountain, and is computed to contain 4000 inhabitants. Nearly the whole business of the town is the manufacture of watches and clocks. As we were to stay here but a few hours, I hastened to take a letter of introduction directed by our kind friend Montmollin, "à Monsieur, Mon-

sieur ——— ministre du Saint Evangile, et tres digne Pasteur, à Chaux-de-Fond." But to our regret the "very worthy pastor" was not at home. He had left his flock for a season, and gone to Neuchatel to get in his grapes, and make his wine. Our next resource was a "garçon de place," one of a very useful kind of people, who are to be met with in every town, not excepting those on Mount Jura. They are mostly recognised by the government, and are obliged to conform to prescribed rules and prices, when hired by the day, and this secures their fidelity. He escorted us to one of the principal watch dealers, Robert Droz & Co. We were immediately invited into the shop, and to satisfy our curiosity, (for we stated that to be our motive,) the drawers and cases were opened with the utmost politeness, and watches, in a greater variety than I had ever seen, displayed before us. As to prices, a stranger must be hard to please if he cannot be suited, for he may have his choice between two and a half, and two hundred dollars. We were offered gold watches for four and a half Napoleons, or seventeen dollars. Vast quantities of these low priced articles, are manufactured expressly for America. We have been told that one house in this town, sends annually to America 20,000 watches, but it comprehends, probably, both North and South America. These traders, finding that English watches were gaining a preference in our market, on account of their superiority, now make theirs to imitate, precisely in appearance, those of London. Many of those shown us, were marked George Prior, London. None but a watchmaker can, on this account, discover the difference between a valuable watch, and one of those spurious articles, which are sold in such quantities at auction in New-York. Musical boxes were also displayed in great variety. In another house we were shown clocks of various sorts. One of them was placed behind a beautiful painting, representing a village landscape; in the village was a church with a steeple, and in the steeple a clock, the hands of which being moved by the machinery behind, kept good time, and the hours were struck, so as to complete the illusion. We remained about two hours at Chaux-de-Fond, and then continued along the valley to Locle, a similar town, two leagues farther.

It was dark when we arrived, but our quarters at "the Balance" proved to be very good, and a comfortable fire and plentiful supper, compensated for the cold and wet, to

which we had been exposed in our mountain ascent. Having a letter from the secretary, for "Monsieur Houriet," a noted watchmaker and dealer, the innkeeper went to inform him of it, to save me the walk. He was not at home, but his son came, and finding the letter was from M. Montmollin, said his father would be happy to wait on us, and as he was only engaged in company at a short distance, he would inform him of it. This we desired him not to do, as our stay would be very short in Locle. The old gentleman, however, soon appeared, and was very complaisant, offering his services very heartily, and giving us a great deal of information.

7th. We find that M. Houriet occupies the largest house, and is the wealthiest man in the place. His shop is exceedingly neat, and contains a variety of ingenious pieces of mechanism, for which he has a particular talent. He showed us a neat little balance, weighing only thirty-five grains, and which turned with the 4096 part of a grain. He went with us to see several objects of curiosity, which the town and neighbourhood afford. The first was a charity school, containing about forty children, "*tiré de la misère*," as he expressed it. They are lodged, clothed, and fed, taught to read, write, and cypher, and to understand music, and are employed in the manufacture of lace. We found them busy at work, seated at small tables, and handling the little spools with great dexterity. Lace is made by a kind of hand-weaving or twisting, the thread being wound on very small spools. We were shown some patterns, in which 600 of these spools must be handled in succession to produce the figure. The examining of the children, Houriet supposed, might amount to one third, or one half of the expense of their maintenance. The residue is provided by a charitable society of females, of which his daughter is an active member. One of these little creatures was found at the door of the house, one morning, in a bag, with a note, stating that its parents were in the utmost distress, and unable to preserve it; and this the committee afterwards found to be true. The mistress had them all collected into one room, and made them sing a hymn before us; which they performed while at their work, without notes or book.*

* It was truly delightful to find, in a village so remote from the vulgar throng, such a display of Christian charity. It was commenced by Mademoiselle Calame, who accustomed herself, from her early youth, to visit the abodes of distress, and to assuage the wants of the poor. In 1820 it contained eighty girls. *Bib. Univ. April, 1820.*

We were taken farther on to see a work of great industry and enterprise. The stream which runs through the valley, had no other outlet than an almost perpendicular cavern or pit, in the side of the mountain. This outlet, in the spring of the year, was insufficient to carry off the water, and a considerable portion of the valley was, in consequence, overflowed. A project was conceived, of perforating the mountain in a different place from the cavern, and driving a canal through its base. This was treated, at first, as an extravagant whim; but at length put into execution and completely effected. The base of the mountain is 920 feet thick, and the width of the canal is five feet, and its height four and a half. It is driven mostly through solid rock. Houriet informed us that, when the barometer was low, (its medium height being but twenty-six inches,) the workmen could scarcely breathe in the cavity of the canal, and were obliged to desist, till the weather changed. When the passage was completed, a grand fête was held on the spot; at the conclusion of which the water was suddenly opened into its new channel, and rushed in a torrent through the mountain. As soon as it appeared on the other side, the hills rang with acclamation and triumph. The valley is now converted into a fine meadow. At the cavern, or place of its former exit, three mills were constructed, one over another; the water pouring from the upper wheel on the second, and from that on the third. The lowermost of the three is now neglected.

The town of Locle contains 4000 inhabitants, all manufacturers either of watches or lace. Our conductor, though seventy-four years of age, had the sprightliness and vivacity of a young Frenchman. By his talents and wealth he has become the chief of these village mountaineers. He informed us that the king of Prussia, in his visit to the Locle, had breakfasted with him "à la fourchette;" which implies, a breakfast at eleven or twelve o'clock, with all the variety of a dinner. As an evidence of the social character of these people, Houriet stated that he had appropriated a large room of his house to the purpose of a conversation, or meeting, which assembled every evening for conversation, and other amusements which they consider rational.

The day being cloudy and misty, we were prevented from enjoying that noble view of the Alps, which the descent of the Jura affords. The great Alpine ranges, must,

in clear weather, present themselves, with the most sublime effect, from the top of these sister mountains ; and probably, from no situation, could they be viewed with more of panoramic grandeur and beauty, than from many points over which we passed in this day's ride. The scenery, however, immediately around us was very interesting. The canton of Neuchatel is a duchy of Prussia. The king derives little or no revenue from it, but its acknowledged allegiance serves as a political check, in ordinary times, on the side of France. It forms also a constituent part of the Swiss government ; that is, it is represented in the general diet and has a vote with the other cantons. It bears the same relation to Prussia, as Hanover does to England. Its population is about 40,000. Its surface is altogether mountainous, the land producing not more than sufficient for one fourth of the people : their mechanical industry and talents supply them with the remainder. There are probably more watches made in this canton, than in all the world besides.

In our descent from Locle, we passed through or near Colombier, St. Aubin, Grandson, and other villages, and arrived at Yverdun about nine in the evening. We put up at the Hotel de la ville de Londres, where we found the accommodations rather of a superior kind.

8th. Breakfast finished, our first and chief concern here was to visit the celebrated institute of Pestalozzi. This establishment occupies a large castle, the use of which was granted to Pestalozzi by the canton of Berne, when the town of Yverdun was included in that canton, and the government of the Pays de Vaud, to which it now belongs, continues the grant. On entering the castle, we were invited into a private room. I gave my letters to the person in attendance, who took them immediately to the chief. The good old man soon came in, seized me warmly by the hand, and seeing my hat on my head, he pointed to it in a sort of ecstasy, with his eyes almost filled with tears. I hardly knew how to interpret this emotion, and asked him if he wished me to take it off. He answered very earnestly, " no, no, no, keep it on, you are right." He seemed very glad to see us, and as he speaks French very imperfectly, and with an indistinct accent, he said he would call Monsieur Greaves to talk with us. This gentleman soon came and entered immediately into a detail of the institution, its principles, its spirit, its arrangement, &c. He is an English-

man, and, as I found upon inquiry, brother to the lady whom I had seen at Lausanne. He has been some weeks with Pestalozzi, for the purpose of understanding his system thoroughly, in order to aid a sister in England in the education of her children. He enters warmly into its concerns, and will be useful in making it better known. He explained to us very clearly the leading ideas and views of human nature, which induced Pestalozzi to become an instructor of youth. The two great instruments with which he works are faith and love. He discards the motives of ambition and emulation, as unnecessary, and as tending to counteract the sentiment of good will toward others. He thinks there is enough in the intuitive understanding of every child to accomplish the complete growth and maturity of its faculties, if its reason be properly trained and nourished, and not warped by injudicious treatment. The common plans of education he regards as too artificial, too wide a departure from nature. Too much stress is laid upon the memory, while the imagination is too much neglected. If the native feelings of the heart, are allowed to operate, under the dominion of the native powers of the mind, drawn out and expanded by faith and love, the child is competent of itself to arrive gradually at the most correct and important conclusions in religion and science. There is a native and inherent life, which only requires to be cherished by genial treatment, to bring it into the full attainment of truth, and to the utmost perfection of its being. He therefore insists upon the greatest pains being taken to draw out this native life and to preserve it in full vigour. There is a constant danger of urging the child forward beyond its natural strength, of anticipating its conclusions and thus weakening its confidence in its own powers. In the plans he adopts nothing is to be got by heart. The understanding is to be thoroughly reached, and then the memory will take care of itself.

His school consists at present of about ninety boys, German, Prussian, French, Swiss, Italian, Spanish and English. It is divided into four principal classes, according to the attainments of the pupils. These classes are subdivided into others. There are seven school rooms in the castle, and twelve teachers or professors. His head professor, Joseph Schmidt, has been brought up in the institution, and is a very efficient and worthy man. He is a native of one of the German cantons, and speaks and writes perfectly the

German and French. He is a man of modest demeanour and entirely devoted to the institution. He has written treatises on several of the subjects taught in the school, and adapted to its methods.

We spent most of the day in the different school-rooms, witnessing the exercises of the scholars. Very few books are used, as it is expected the children can read well before they come there. But to describe the modes of teaching, so as to render them clearly intelligible, would require much more time and space than I can possibly allot to it, were I ever so competent to make it known. We saw the exercises of arithmetic, writing, drawing, mathematics, lessons in music and gymnastics, something of geography, French, Latin, and German. To teach a school, in the way practised here, without book, and almost entirely by verbal instruction, is extremely laborious. The teacher must be constantly with the child, always talking, questioning, explaining, and repeating. The pupils, however, by this process, are brought into very close intimacy with the instructor. Their capacities, all their faculties and propensities, become laid open to his observation. This gives him an advantage, which cannot possibly be gained, in the ordinary way in which schools are generally taught. The children look well, appear very contented, and apparently, live in great harmony one with another ; which, considering the diversity of national character and temper here collected, can be attributed only to the spirit of love and affection which sways the breast of the principal of the institution, and extends its benign influence throughout all the departments. In the afternoon we went, with Pestalozzi, Greaves, and Bucholz, a German clergyman, (who is here on a visit to the institution,) and one or two others, to visit a free school of twelve or fourteen children, which Pestalozzi has established in the village of Clendy, at a short distance from the castle. These are children taken from the families of poor people, selected on account of their character and talents, in order to be educated as teachers, with a view to extend and perpetuate the principles and operation of the system. One half of them are boys and the other half girls. Their principal instructor is a sister of Schmidt, the chief master, an exceeding clever and interesting young woman. She has another sister also with her, younger than herself, who will soon become qualified to act as an instructor. These pupils were exercised before

us, in drawing, in arithmetic, and in music. The girls, seated round a table, and busy with their needles, had questions in arithmetic given them by the mistress, which they were to solve by their heads. They are thus led on, from the most simple beginnings, to comprehend the principles of arithmetic, and to work questions with great expertness, solely by a mental process. A male teacher is provided for the boys though the mistress often assists in their instruction. This little school promises to be well cared for, and of service to the Pestalozzian cause. We were much pleased with its appearance, and with the assurance it affords, that whatever there is of value and importance in this system, will not be lost.

The success of this mode of instruction, greatly depends on the personal qualifications of those who undertake to conduct it. There is nothing of mechanism in it, as in the Lancasterian plan; no laying down of precise rules for managing classes, &c. It is all mind and feeling. Its arrangements must always depend on the ages, talents, and tempers of the scholars, and require, on the part of the teachers, the most diligent and faithful attention. Above all, it requires that the teacher should consider himself as the father and bosom friend of his pupils, and to be animated with the most affectionate desires for their good. Pestalozzi himself is all this. His heart glows with such a spirit, that the good old man can hardly refrain from bestowing kisses on all with whom he is concerned. He holds out his hand to his pupils on every occasion, and they love him as a child loves its mother. His plan of teaching is just fit for the domestic fireside, with a father or mother in the centre, and a circle of happy children around them. He is aware of this, and wishes to extend the knowledge of his plan to every parent. Pestalozzi is seventy-two years of age. It has been quite unfortunate for the progress of his system on the continent, that he pays so little attention to exteriors, regarding dress, furniture, &c. as of no moment whatever, provided the mind and heart be right.

9th. The weather continuing wet, we resolved to wait till the morrow, and take the diligence to Lausanne and Geneva. Much of the day was spent at the castle, in the school-rooms, and in conversation with Greaves. I omitted to mention, that we attended last evening, to the religious exercise which terminates the business of the day. The scholars assembled in a room called the chapel, but very

simply furnished, with benches, and a table. When all were collected, Pestalozzi, directing his face chiefly to the boys, began to speak in German, moving about, from side to side, directing his attention, for some time, to the boys on his right, and then advancing toward those on his left. This motion, backward and forward, continued about twenty minutes ; he was constantly speaking, and sometimes with considerable earnestness. It was altogether unintelligible to me, but I afterwards learned, that it consisted of a recapitulation of the occurrences of the day, noticing particularly every thing of moment, and intermingling the whole with short prayers, adapted to the circumstances mentioned in the discourse. If, for example, any of the boys had quarrelled, or behaved unseemly to each other, or to their teacher, he would speak to the case, and accompany his remarks with a pious ejaculation. It is probable, that he sometimes engages more formally in this exercise. As it was, it appeared to gain the whole attention of his audience. It was concluded by reading, from a small book, what appeared to be a hymn or psalm.

A company of English visitors attended at the castle to-day, consisting of men and women. The boys performed some of their gymnastic exercises before them, consisting chiefly of simple, but simultaneous movements of the arms, legs, feet, head, &c., stepping, marching, turning, and jumping, all intended to exercise the various muscles which give motion to the limbs and head, and to make the boys acquainted with the elements of all those movements. This exercise took place in one of the large bedrooms. We attended, by invitation, last evening, a lecture given by Schmidt, the head teacher, to a number of young men, among whom were four Russians, sent by the Emperor to gain information, in England, and other countries, relative to the best modes of teaching. They had been in England, and spoke our language tolerably well. The lectures are to illustrate more fully, the principles and processes adopted in the Pestalozzian institution.

We had the company, this evening, at our lodgings, of Frederick Bucholz, who was lately a chaplain to the king's German legion in England. He had been some time with Pestalozzi, and was able to give us more information with respect to some parts of the system, than we could obtain by a short visit to the school itself.

10th. The town of Yverdun is pleasantly situated, at the

head of the lake of Neuchatel, and contains, probably, 2500 inhabitants. It is pretty well built; the streets in common with most of the towns in Switzerland, are paved with round stones. We have been surprised, in observing the large droves of cows, which have passed through the streets to-day, most of them with huge bells round their necks. The noise they make is almost deafening. These cows are taken to the mountains to pasture, during the summer, in great numbers; the shepherds, or rather cowherds, allowing a certain sum for the produce of the milk and butter. On the day of St. Denis, they are returned again to the valley.

We have had at our table d'hôte, during the last two days, ten or twelve boys, with their three preceptors, constituting a boarding school at Geneva. They are on an excursion, round the lake of Geneva, taking Yverdun in the way.— They came to this place on foot, through the rain, and intended to perform the whole journey on foot; but the weather continuing very wet, they went off this morning in carriages. One of them is a young prince of Wirtemberg, about twelve years of age, of plain juvenile manners, exhibiting no extraordinary talent but apparently of an amiable temper.

We left Yverdun in the diligence, after going again to the castle, and taking leave of some of the professors. Pestalozzi was not in; he had been to see us at the inn, but missed of us. Before we set off, however, the good old man came down again, and parted with us very affectionately. In the course of two days which we have spent at the castle, he several times pressed my hand to his lips, and seemed to possess all the love and fervency of a true disciple in the cause in which he is engaged. If his personal talents, address, and management, were equal either to his genius, or his zeal, his influence would have been much greater even than it has been. Nevertheless, the period of his life and labours will, I fully believe, be hereafter regarded as almost important epoch, in the history of education. When his principles come to be more generally understood, they will be found to contain much that is extremely valuable. It is to be feared, however, that many years will still elapse, before the world is put in possession of a complete explanatory view of his whole system. He does not himself possess the faculty, (as Buchholz informed me,) of explaining, in familiar and intelligible terms, his own principles. He

conceives with wonderful acuteness, and expresses himself in language of extraordinary force and energy ; but it requires a deep and steady attention, to be able to embrace his whole meaning. He has published largely in explanation, and in support of his plans of instruction ; but there is so much of vernacular pith—of idiomatic force and peculiarity in his style and manner, as to render it rather difficult to read him, and still more so, to translate his writings. He is now, however, anxious to have all his works translated into English, fully believing, that the merit of his plans will be better understood, and his principles more industriously supported by the English nation, than by his own people. His career has been marked with perplexities. He has had to struggle intensely against poverty, neglect, prejudice, and gross misrepresentation ; but his patience, his meekness, his perseverance, his ardent love of his fellow creatures, have borne him through all his trials ; and notwithstanding his advanced age, the reputation of his school, is now as high, if not higher, than it ever has been. Toward those who have generously contributed to aid him in his pecuniary difficulties, his heart glows with the liveliest gratitude. Of two of my acquaintance, one of London, and the other of Philadelphia, who had thus befriended him, he could not speak without evident emotion.

The road to Lausanne is very picturesque, passing along the valley of the Orbe, which empties into the lake. The view from the town of Orbe, situated on a high eminence, is considered as inferior to few in this romantic country, for richness of prospect. But the day being cloudy and wet, we could not so well enjoy it. We reached Lausanne soon after dark, and occupied again our former rooms at "the Balance."

11th. Left Lausanne at five. The rain had ceased and the morning was pleasant. Arrived again at Geneva. I found upon inquiry, that Professor Pictet had gone to Paris, and it being a period of vacation in the academy, the other professors, or at least some of them, were also absent.

The state of morals in Geneva, appeared to me to be upon the whole very respectable. There was little appearance of disorder in the street, and much less apparent neglect of the Sabbath, than was obvious in France. On the evening of that day, however, when the religious exercises are over, public amusements are more resorted to than in England or America. On one of those occasions, during

our stay in Geneva, the theatre was open in the evening, and a comedy advertised to be acted. The town has been much agitated of late with religious disputations. The question lies, if I understand it rightly, between Calvinists and Unitarians. The contest is of long standing, and the temper it produces, as is almost infallibly the case, is adverse to the growth and operation of vital religion.

We called this evening on Simonde de Sismondi, to whom I was introduced by Bishop Gregoire. There are few Swiss writers who hold a higher rank in the republic of letters. He speaks English with ease and fluency, and we had a pleasant and interesting conversation.

LETTER XV.

Milan, 10th month, (October) 20, 1818:

MY DEAR ***** AND *****,

HAVING decided upon crossing the Simplon to Milan, we were occupied during part of the day, in inquiring after and engaging a good voiture. Geneva abounds with voituriers, or hackney-men, all disposed to gain a job, and prompt in offering their accommodations, but not all worthy of implicit confidence ; and as the journey requires six or seven days, it became a thing of some consequence to secure a good man. We at length engaged with — Populus, a person recommended to us by Sismondi, to take us to Milan for 144 francs each, including dinner, supper, and lodging. The dinner to consist of four dishes, besides soup, fruit, and such wine as the country afforded, but not foreign wine. The supper to be the same as the dinner. Three persons besides ourselves were to be accommodated in the carriage. On concluding the bargain, I was surprised at his putting into my hand, several crowns in silver ; but this, I learned, was the mode of sealing an agreement. He who is to perform the service, deposits with the other party, a sum which is to be the pledge of his fidelity. It is called the “*arrhe*,” and is to be returned when the service is over.

Sismondi called at our room to day, and in the course of conversation, gave us much information relative to the laws of Switzerland, and the political condition of the country. The trial by jury, (as he stated,) is but partially adopted. In France it is not known in civil cases. The judges are numerous, their salaries low ; and obsequiousness to power

is but too manifest in their decisions. The government of Switzerland, is highly aristocratical; and its measures, at least in some of the cantons, are more arbitrary than under the former cantonal government, prior to the revolution. In the ancient aristocracy, there was a great deal of feeling for the people; but at present it is much the reverse; the councils doing all they can to strengthen their own power. The number of paupers has greatly increased, in consequence of the embarrassments of trade, arising from the regulations of France. Taxes are nowhere resorted to in this country for their support, but funds are voluntarily raised, and hospitals or alms houses maintained for that purpose.

We called to see L. Simond, of New-York, who remains temporarily at Geneva. He had gone to Berne, but his wife who is a New-York lady, received us very kindly, and induced us to stay to tea. We found there a Scotch lady, who, it appeared, was to be one of our companions to Milan. We discovered from her conversation, that she possessed an improved mind, and all we could learn in addition was, that she had lived some time in Switzerland, and was going to Italy to spend the winter, and that she had had resolution enough to decide upon taking the journey without any particular companion.

In preparing to leave Geneva for the third and last time; I must acknowledge that I have been much gratified with the opportunities I have had of becoming acquainted with a place so remarkable for its distinction in letters, science and politics, and for a population so intelligent and agreeable. To Professor Pictet and his interesting family, I have been particularly indebted for many civilities. Professor P. is a truly estimable character. Few individuals in Geneva, or in Switzerland, enjoy a higher reputation, for qualities which add dignity to human nature. He has long been the editor, (in conjunction with his brother,) of a monthly journal of science, which has done much to spread on both sides of the Alps, a taste for learning and the useful arts. It was continued twenty years under the title of "*Bibliothèque Britannique*," and extended during that time to 144 volumes. Its particular object was to diffuse, throughout that part of the European continent, a knowledge of the progress and actual state of British literature and science, but not unconnected with domestic learning. The title was considered, at length, to be too exclusive, and it is now in the fourth year of a new series under the title of "*Bibliothèque Uni-*

versel." It is conducted with a fidelity and ability, very creditable to the editors, and to the country.

Although the appearance of Geneva may disappoint a stranger, in consequence of the uncouth form and decaying aspect of many of the houses, and the irregularity of the streets, it will be acknowledged by all to be almost without a rival, in picturesque beauty of situation. Standing at the western extremity of one of the finest lakes in the world, and on a surface very much diversified in point of elevation, it affords an interesting variety of appearances in different places.

The Rhone issues from the lake in an impetuous torrent. The waters are extremely limpid and as they rush over the obstructions at the bridge, the green rays of light are beautifully reflected from them. The greatest part of the town is on the south side of the river. The rapidity of the current serves various important purposes of manufacture, and pumps up the water likewise which supplies the fountains of the city. From the highest part of the town, in the neighbourhood of the street, very properly called "*Rue de Beauregard.*" a prospect is open, which, in good weather, is truly enchanting. On the west is a most delightful champaign, luxuriant in cultivation, interspersed with seats, farm-houses and villages. In the northern horizon is the Jura, forming a long and even line of misty elevation; at one's feet is the city and the gushing waters of the Rhone; on the northeast, the lake spreads its placid bosom, ornamented on its northern border with the populous villages of Copet, Nyon, and Rolle, all situated in a region of the highest cultivation; on the southeast and south the eye wanders in amazement among the mountains of Savoy, rising in tumultuous succession with wild and inexpressible grandeur. Some of these mountains are almost always covered with snow, and among them on a clear day, Mount Blanc is distinctly perceived, giving, to this unparalleled landscape, a finish of the greatest sublimity.

Geneva is remarkable for the ingenuity and delicacy of its fabrics, more especially of those connected with watch machinery. I was surprised to find that some of the richest shops are kept in the upper rooms of the houses. The most noted collection of watches and jewelry must be sought for by passing through a dark court, and mounting a narrow staircase to a room in the fourth story. Whether this proceeds from considerations of safety, or from convenience to

the dealers, I cannot say, but a shop in such a situation in one of our cities, would stand a poor chance of gaining customers.

The wonderful talent of these mechanicians is admirably displayed in the little automaton boxes that are occasionally exposed for sale. In one of the shops we were shown a gold box of the size of a snuff box, which being wound up and placed on the table, a small drawer was opened, at the bottom, containing a number of little counters, each marked with a particular figure. Into a cavity in the drawer, we were desired to put any one of the counters we chose, which being done the drawer was shut. On touching a spring the lid of the box flew open, and up rose a magician, in the figure of an old man with a grave aspect and a long beard, and holding a rod in his hand. He stood before a tree, and after making a number of grave motions with his head and stick, he at length turned round, and pointed with his rod to an opening in the branches of the tree, where was seen the precise number of the counter placed in the box. These counters appeared to differ in no respect from each other, except in the figures engraved upon them; and yet the magician would raise the same number precisely, in the tree. One of the counters was a blank. When this was put into the drawer, the figure, after its usual incantations, pointed to the tree, but finding nothing there, he appeared thoughtful, recommenced his manœuvres, and again finding nothing but a blank, he shook his head as if in despair, and ceased his operations. I have seen a box of similar size still more curious. The spring being touched, the lid flew open, and a very small bird of beautiful plumage, perched itself on a post, hopped round, fluttered its wings, opened its bill, sang several notes—then folding its wings, it turned on its side, sunk quietly into the box, and the lid closed.

Ebel in his excellent "*Manuel du Voyageur en Suisse*," states that "Droz, the father of the present house of that name at Chaux de-Fond, being at Madrid, he exhibited before the king a clock, on which was seen a negro, a dog, and a shepherd. When the clock struck, the shepherd played six tunes on his flute, and the dog approached and fawned upon him. The King was delighted. The gentleness of my dog, said Droz, is his least merit. Let your majesty touch one of the apples which you see in the shepherd's basket, and you will admire the fidelity of this animal. The king took an apple, and the dog flew at his hand

and barked so loud, that the king's dog, which was in the room, began also to bark. At this the courtiers not doubting that it was an affair of witchcraft, hastily left the room, crossing themselves as they went out. The Minister of Marine was the only one that ventured to stay. The king having desired him to ask the negro what o'clock it was, the Minister obeyed, but he obtained no reply. Droz then observed, that the negro had not yet learned Spanish, upon which the Minister repeated the question in French, and the black immediately answered him. At this new prodigy the firmness of the Minister also forsook him, and he retreated precipitately, declaring that it must be the work of the devil. The son of Droz, was, at the age of twenty-one, as great a mechanician as his father."

The English or American traveller, will find in Geneva, a state of society differing much less from that of his own country, than in Paris, or other cities of France. The practice of drinking tea, and of inviting company to tea, is common here. Whether it was in connexion with this very rational and exhilarating custom, that the terms comfort and comfortable, have been adopted into the language, I know not, but these terms are now frequently used in the social parlance of Geneva.

14th. At seven, our carriage being in readiness, we set out from Geneva with three horses and a company of six persons besides the postillion. In addition to the lady and ourselves, two officers appeared and took their seats. The morning was foggy, and seemed rather portentous of bad weather; but toward noon the mountains began to appear, and the Alps to exhibit their snowy eminences on our right. The road lay near the lake. The country was generally well cultivated, the vine being the staple growth, and the people were busy with the vintage. The villages through which we passed, had a coarse, crowded, and very unpleasant appearance, altogether inferior to those on the other side of the lake. The soil on this side is less fertile, and the climate not quite so friendly; but it is to be apprehended that the difference, so observable in the comforts of the people, is very much owing to the government, (Sardinian,) and to the want of religious toleration. We dined at Thonon, the former capital of Chablais, a considerable place, about half a mile from the lake. We walked to the hospital, a spacious building, with a court inside, and a large staircase, entries, suite of rooms, &c. It was formerly a

convent of monks. There were six other convents in this town, prior to the revolution, but at that period, the estates were confiscated and the property sold. The hospital contained but few patients, and these all poor and badly accommodated. Near Thonon, on the lake, is a celebrated mansion and grounds called Ripaille, once the residence of Pope Felix V., who resigned his supremacy, and retired thither to devote himself more uninterruptedly—not to religion, but to licentious gratification. From this circumstance is derived, it is said, the French verb *faire ripaille*, (to banquet.) The estate was bought by its present owner, for 400,000 francs; but it is now supposed to be worth double that sum.

Vivian is a village of some extent, on the borders of the lake. We passed hastily through it, and arrived at St. Gingoulph, near the head of the lake, some time after the full moon had risen. The road, worked with vast labour on the margin of the water, was in the best order. The moon, as it rose in “cloudless majesty” directly before us, exhibited a scene truly delightful. Its silver beam was reflected with superior brightness, by the clear unruffled surface of the water; castle Chillon, at the foot of the mountain over which the moon ascended, was in view, and also the towns of Vevey and Montreux, on the other side. It was a picture worthy of the imagination of a poet, and we could not wonder that Byron had made the border of this lake his residence. Our female companion, who had resided a year at Vevey, informed us that he once knocked up some boatmen at that place, in the night, and engaged them, for a considerable sum, to take him out on the lake in a high storm. The inn at St. Gingoulph, was formerly a castle. The host and the maids were very attentive; and furnished us with a good supper and good beds.

15th. Set off at six. A previous cup of coffee had disposed us to enjoy whatever the road afforded that was interesting or curious. We took leave of Savoy, at the inn, and entered Le Valais, one of the Swiss cantons. It comprehends the valley through which the Rhone flows from its source in the Alps, to its junction with the lake of Geneva, together with a number of lateral valleys, which open into it. Our road lay near the Rhone, and during most of the day, immediately on its bank. The river, at its embouchure into the lake, is nearly as wide as at its egress at Geneva, but not so rapid.

At St. Maurice, we stopped to dine, and from all we saw of the inn, and its attendants, we united in the very favourable recommendation, given it by Sir H. Davy, and his lady, which we found in the traveller's book. Nearly all the inns I have been at, on the continent, keep a book, in which every lodger is requested to inscribe his name, his profession, his country, and, in most cases, his age, and his motives in travelling; the places he comes from, and that to which he is bound. You will perceive from this, that the custom of interrogating travellers, in order to obtain their secrets, and to satisfy curiosity, is not confined to our side of the Atlantic, though foreigners have endeavoured to stigmatise us, on account of the disposition which they ascribe to us, of asking questions. The difference is, that in America, the traveller gives this information, *if he chooses*, to those who modestly ask for it; and here, he is, in some measure, *compelled* to publish it to the world, by writing it in a book.

At St. Maurice is a bridge over the Rhone, said to have been built by the Romans. While dinner was preparing, we took a guide, (a girl of twelve or thirteen) and ascended to a great height, to view the dwelling of a hermit. His habitation is placed upon a narrow spot, upon the side of a mountain, the face of which is a solid, and almost perpendicular rock. A pathway has been cut in the rock, with great labour, in a winding direction, to the hermitage. A chapel has been also erected on the dizzy height, to which the monks, and the good Catholics below, clamber up every morning, to join the hermit in devotion. The old man lives upon the charity of his neighbours, but often has to descend to the village to get his dinner. To our regret, he was not at home, and both his gate and his chapel were locked. The inhabitants of the village are all Catholics. The influence of superstition among them, was evident, from a simple story of our pleasant and communicative little guide. A child, she said, once fell from near the chapel, to the bottom of the precipice below. Its attendants, in the utmost distress, hastened down the circuitous path, to take up its lifeless body, and convey it home. Arrived at the spot, they found the child sporting on the grass, with a nosegay of flowers, which it had just been gathering on the plain, not having received the least mark or injury from the fall. It was then made known to them that the holy virgin had interposed, and caught the child in her arms, and saved it harm-

less. In commemoration of the event, a picture has been placed in the chapel, descriptive of the falling child, in the arms of the virgin.

The valley, at this place, is very much contracted, by the approach of two mountains, *La Dent de la Morcle*, and *La Dent du Midi*. It is said to have been in, or near this spot, that the Theban legion, of 6000 men, were massacred by order of the Emperor Maximinus, for refusing to pursue and destroy a body of people, whom they believed to be innocent and virtuous. The soldiers of this legion, had been converted to Christianity, in Asia, and were baptized into that faith, by Zabda, Bishop of Jerusalem. On arriving at St. Maurice, (the ancient Agaunum,) and learning that they were destined to pursue Christians, they refused to obey. The emperor, then at Martigny, enraged at this resistance, ordered the legion to be decimated. This was done, a first and a second time, without changing their purpose. "We are," said they to the emperor, "thy soldiers, but we respect God more than thee. He has given us life, and from thee we only receive the pay of our services. We can fight our enemies, but we will not imbrue our hands with the blood of virtuous men. If thou dost not require us to commit so great a crime, we are ready to obey thee, as we have hitherto faithfully done; but we are Christians, and cannot destroy our brethren." This noble and magnanimous reply, made in presence of their bleeding and lifeless companions, only increased the rage of the tyrant; he ordered them to be surrounded by his pagan army, and all put to death.

The ride, this afternoon, was very interesting, from the serenity of the weather, and the beauty of the scenery around us; the valley, on each side, being bounded by mountains, whose summits were occasionally clothed with firs, which glittered in the sun like trees of gold; while, behind them, were pointed eminences of the snowy Alps. The border of the Rhone, in this part of the valley, is much encumbered with rushes, and the agriculture must necessarily be very scanty. Between St. Maurice and Martigny, is a remarkable cascade, well known by the *modest* name of *Pissevache*. It is formed by the little river Salanche, which pitches over a mountain precipice, and falls nearly three hundred feet, breaking against the shelving side of the mountain, and scattering its spray to a great extent.

About four, we arrived at Martigny, where we were to

remain till morning. We walked up the valley, before the sun went down, to observe more fully the great devastation, and the heavy suffering, which this place sustained, on the twenty-first of June last. This event which has been published throughout Europe, is briefly as follows :—A gorge, or valley of a mountain, near St. Bernard, had become closed or dammed by ice, so as to form an extensive lake. It was foreseen, that the pressure of the water, in this lake, must ere long, break its barrier, and rush down the valley, with destructive force. But, among the Catholics of Switzerland, though events of this kind are anticipated, they prefer, very often, to repose in the protection of a favourite saint, rather than to save themselves by precautionary measures. Considerable efforts were made, however, to prevent the disaster, by endeavouring to perforate the icy bank, near the bottom, and allow the water to pass off ; but about half past three in the afternoon, the brittle mound gave way, and the body of the lake, bearing away with irresistible fury, rocks, trees, houses, cattle, &c. arrived at Martigny, at six ; destroyed eighty buildings ; killed at least thirty-four persons ; filled the lower stories of the town, with water and mud, and piled up, to an enormous height, wood, trees, and rocks, marking the whole plain, with the most frightful ravages. It required almost incredible labour, to clear the streets of the mud and rubbish, so as to render them passable. Great quantities still remain in them, in large heaps. A more melancholy aspect I never beheld, excepting perhaps, the remains of an extensive conflagration. A boy who had just returned from the mountain, with his goats, told us he had saved himself, by hastily climbing the mountain. The little fellow answered our inquiries, with singular naiveté and distinctness ; and finding that we were disposed to be friendly, he turned to us, and said “ *Auriez vous la complaisance, Messieurs, de me donner quelque chose pour souper.* ”* It was an appeal we could not resist.

An incident occurred, during the progress of this mighty torrent, which adds another to the many proofs of the wonderful nature of animal sagacity. A gentleman, mounted on a mule, was descending the valley, toward Martigny, unsuspecting of danger. Suddenly the animal pricked up its ears, and made an effort to leave the road. The rider, neither seeing nor hearing any thing that should occasion

* Will you have the kindness, gentlemen, to give me something for supper.

this freak, forced the creature back into the path. It still manifested uneasiness, and, in a few minutes after, in spite of resistance, scrambled, with all its might, up the side of a mountain, carrying its unwilling rider along with it. But in a minute after, the roaring of the torrent was heard, and the devastating flood passed, with its awful rapidity, leaving the terrified traveller absorbed in the feelings of astonishment and gratitude.

In the evening, we had the company of an English gentleman and his wife, who had resided some time at Vevey. They were about to venture on a journey to Chamouny, over the Col de Balm—a perilous undertaking, at this late season. They mentioned to us, the fact, that two or three English ladies, one of them only fourteen, had lately performed a pedestrian tour over the Simplon, St. Bernard, and other parts of the Alps, to the distance of 400 miles, hiring people from place to place, to carry their luggage. It was a tour of female curiosity and heroism. They had one man to bear them company.

16th. Off at five. The Valais improved as we advanced. The grape began to appear again on the southern aspect of the mountains, and Indian corn is one of the staples of this remarkable region. We passed several hamlets, some of them tolerably neat. The mountains were exceedingly picturesque, especially where the goats appeared browsing among the rocks, near the summits.

The farm houses in this canton, and indeed in other parts of Switzerland, have a very plain and coarse appearance. The roof projects so far beyond the walls of the building as to form a gallery, or shed, under which the wood, for winter-fuel, is piled up. The roof itself consists of thin planks, kept down by large stones. The barns are erected upon posts, on the top of which large flat stones are placed, forming a projection, which prevents the rats from gaining admission.

The goitre occurs very often ; and in almost every village cretins are to be seen. These poor creatures are uniformly more or less idiotic. They place themselves in the sun, before the doors of the cottages, in a state of stupid inaction, and if spoken to, their features are contorted into an unmeaning grimace, which shocks one's feelings ; and, if they attempt any reply, it is by an inarticulate and scarcely human sound.

The immediate cause of such a frequent occurrence of

goitre and cretinism, in these Alpine valleys, is a question, which still admits, I believe, only of conjectural solution. Saussure, who entered elaborately into the subject, assigns the heat of the valleys, and the stagnation of the air in them, as the principal cause ; and it is alleged, that the number of cretins has sensibly diminished, since greater precaution has been taken, by persons in easy circumstances, to remove their wives to the mountains, prior to the birth of their children, and to rear them there, until they are ten or twelve years of age.

We arrived at Sion, the capital of Le Valais, about eleven, and remained there to dinner. The inn was large and commodious. This is a walled town, flanked with towers ; and upon a high hill ; within its limits, are the ruins of an ancient castle, and a convent. The houses are very high, and some of them of respectable appearance ; the population is about 3,000. We went through the principal church, the doors of which were open, and the lamps of the altar burning, though no devotee was there to disturb our curiosity. Ornaments were distributed throughout the whole interior, in such profusion, as to give it more the appearance of a baby house, than a place dedicated to serious reflection. We inquired for the hospital, and were directed to a large building, with an agreeable and rather imposing exterior. We entered it, and soon found that the outside was the best of the establishment, much of the interior being as dirty as a stable. It contained about twenty poor people, two of whom were sick. The house is managed by seven sisters ; one of whom very complaisantly conducted us through the rooms, though the want of cleanliness was so discreditable to the care and taste of the managers. Most of the patients were miserable looking cretins, deformed, yet contented and smiling, though living in dark and filthy holes, and eating only cabbage soup for dinner. In the room of the female cretins a very young child lay on a coarse bed. The sister pointed out the mother to me, and, with the utmost simplicity, remarked, " On fait beaucoup d'enfans ici !" Such an evidence of the absence of moral government, in the chief institution of the capital of this canton, needs no comment.

The German language is chiefly spoken in Sion ; many of the inhabitants understand no French. The Catholic religion is alone professed, and I should conclude, from appearances in several parts of Switzerland, that there is a disinclination in the two sects to live in the same town.

The road from Sion bordered the rapid current of the Rhone, and often, between the rocky cliffs of the mountain and the brink of the river, there was but just sufficient space for the carriage to pass. The day rapidly declined, as we skirted the mountains, sometimes on one side of the river, and then on the other. Their shadows covered us long before the sun went down, but the splendour of the moon, in a cloudless night, reflected now by the snows of the Simplon, compensated for the absence of day. It was rather late before we entered the village of Turtemagne, all in good spirits, from the fineness of the weather, and the beauty and grandeur of the mountain scenery. A dish of coffee, at a fireside, (for the weather has been so cool, for several days, as to make a little blaze of an evening comfortable,) stimulated to conversation our little party, and made us better acquainted. Our female passenger proves to be a well read and sensible person, disposed to converse, and contributing much to our entertainment; but the officers add more to the weight of the carriage draught, than to its stock of moveable intellect. One of them is an Italian, about twenty-three or twenty-five, with as much good nature as I ever saw under a high military hat. His seat was altogether on the outside, in the cabriolet. The other conversed with difficulty, on account of a wound he had received in the mouth. Of my two particular companions, I need say no more, than that I am highly pleased with, and attached to them both. We were waited upon, at this inn, by two of the daughters of the landlady, one of whom spoke both German and French.

17th. At half past two we were called up, and after taking a slight repast, resumed our journey. The queen of night, now in the western part of the sky, beamed with a sweet effulgence, and the air, though cool, was pleasant. The gradual declension of the moon, and the kindling light of day, spreading over a hemisphere without a cloud, opening first upon the tops of the mountains, and extending by refraction into the valley, expelling the deep gloom of the shadows of the lofty eminences around us, and exhibiting the narrow, but level and safe road we were hastening over, infused something of animation and joy into our little company; and something, I would hope, of gratitude to the Author of the stupendous works around us, for the blessings of health and fine weather.

At Glis we availed ourselves of a short stop of the coach,

to look into a large church, the door of which was open, but no person within, the morning mass being over. It was gaily decorated: An image of the Virgin was dressed with trinkets of tin, beads, glass, &c., in a manner, one would think, more likely to excite notions of a ball room, or a village feast, than the soberness of religious worship. This church was erected by George de Supersax, a native of Glis. In a picture in one of the chapels, he is represented with his wife, and their twelve sons and eleven daughters; to which is subjoined the following inscription,

En l'honneur de Sainte Anne,
George de Supersax, soldat,
A fondé cette chapelle l'an de grâce 1519,
A élevé un autel, et l'a enrichi
En reconnaissance des vingt-trois enfans
Que son épouse Marguerite lui a donnés.*

Whether Margaret de Supersax might be taken as a fair specimen of the good mothers of the canton, we did not ascertain.

In walking round the yard, we saw and entered a building, the interior of which surprised us. It was a charnel house containing many thousands of human skulls and other bones, piled up with great care, in regular tiers, along the walls. A crucifix, with a burning lamp, was at the remote end of the chamber, (which was partly subterranean,) and a few old benches at some distance from it, for the convenience of the pious people of the village, who might be inclined to come in, and pray for the souls of those who had once inhabited the empty receptacles around them. Whether these were the bones of persons slain in battle, or collected gradually from the graves of the churchyard, we were not informed; but it is more than probable that they are the remains of those of the Valaisans, that lost their lives in the sanguinary struggle with the French republican army in 1798 and 1799. The inhabitants of the upper valley, made a most formidable resistance against the army of the Directory, by their courage and their knowledge of the country, but they were overpowered by numbers and discipline, and had to endure the most severe sufferings, from those pretended friends of liberty, and the rights of man.

* In honour of Saint Anne,
George de Supersax, a soldier,
Founded this chapel in the year of grace, 1519,
Raised an altar, and enriched it
In gratitude for the twenty-three children
Which his wife Margaret has brought him.

At Brieg, a village of considerable size, and not far from Glis, we stopped to take a fresh recruit of horses, in order to ascend the Simplon. This village is situated not far from the eastern extremity of the valley of the Rhone, and of the source of that river. The Valais is here populous, and has been very long the abode of industry, agriculture, and the arts. The influx of strangers, since the completion of the Simplon road, has relieved the country of much of its poverty, and has nearly, if not entirely, put an end to the unhappy feuds which prevailed between the upper and lower Valais. It was the day of a public fair, and in walking through it, we were amused with the difference discoverable in the shape of the various articles of metal and wood exposed for sale, from those we were accustomed to at home.

We left Brieg at half past eight with five fresh horses, and two postillions, our voiturier remaining to bring on his own two, to the top of the mountain. At half a mile from the village, we were fairly upon the road constructed by the order of Napoleon, and completed by the joint labour of the French and Italians in 1805. This road, so justly celebrated by the characteristic boldness which projected it, and by the surprising skill displayed in its execution, commences, strictly speaking, at Glis; but the care taken to render this passage of the Alps easy and pleasant, is obvious in different places, throughout the whole route from Geneva. It would be difficult to describe the effect produced upon the mind of the traveller, when he first passes over this stupendous road. Though it surmounts one of the snowy summits of the Alps, its inclination no where exceeds two and a half inches in a toise or six feet; so that it is unnecessary, in any place, to lock the wheels in descending. Its whole extent across the Alpine ridge, is about fourteen leagues French, or forty miles. It is not therefore the *extent* of the road, nor is it the *height* of the Simplon, which renders this a work of so much merit. It is the extreme declivity of the successive ridges, the awful depth of the gorges over which it passes, and the prodigious masses of rock to be penetrated and removed, which constitute the glory of an enterprise, that must ever command the plaudits of Europe.

Neat and comfortable stone houses are built at suitable intervals across the mountain. Of these there are seven between Brieg and the village of Simplon, and a corres-

ponding number on the Italian side. The occupant of each of these houses receives twenty-five louis d'or per annum, and is bound to keep his furnace, or stove heated night and day in cold weather, and a room ready for the reception of travellers. A company at Brieg, we were informed, have undertaken to keep the road in perfect repair for ten years, to clear the obstructions as they arise, from snow, avalanches, &c. and to leave it in good order. For this they are to receive from the government 75,000 francs.

Although the ground in some places, as we ascended, was frozen, and ice appeared on the side of the road at mid-day, yet the sun was so clear and powerful, that the exercise of walking rendered our surtouts burdensome. The views obtained from some points of the road, of the valley of the Rhone, the town of Brieg, with its steeple covered with tin, and the opposite mountain with its snows and glaciers, "held and charmed our wandering eyes."

One of the first improvements met with in ascending from Glis, is a handsome covered bridge over the Saltine, a river which flows into the Rhone. On the left of the road soon after the commencement of our ascent, we were struck with the appearance of a temple at a great elevation, and a number of little oratories at different stages of the mountain, nicely white-washed within, and containing each a small crucifix. It is thus that the Catholics associate bodily toil with the exercises of devotion, doubtless from the persuasion that it increases the merit of the service.

About 4 P. M. we attained the snowy summit. The road does not pass over the highest pinnacle, nor does it fall a great deal below it. The snow lay upon the ground nearly a mile, its depth being in some places about a foot. It was a recent snow, for during a few weeks in hot weather the road is entirely dry. Near the top is the foundation of a stone building, about 200 feet long, intended as a hotel or hospital for the benefit of travellers, and capable, if completed, of accommodating several hundreds; but having reached the second story, its progress, like that of a vast number of other buildings and schemes of improvement, was arrested by the flames of Moscow. There is at this place an old convent of monks, who formerly provided for the way-faring man in his passage of the mountain by the ancient and perilous route. As we began the descent, a thick vapour suddenly gathered on the summit around us and curled its misty volumes over the hills and along the

valley in the most curious and fantastic forms ; and before the sun set, we were transferred from the canopy of a serene and cloudless sky, to the midst of a heavy fog. These sudden transitions from a clear and spotless azure, to the close envelope of a dense cloud, are peculiar to mountainous countries, and constitute one of the curious concomitants of an Alpine journey. At the village of Simplon, an ancient little town of about twenty houses, with a church and two inns, we found pretty good accommodations, in a house which, some years ago, had been partly knocked down by an avalanche of snow, by which several horses and two men were crushed to death.

The prevailing rock on the Swiss side of the Simplon, is micaceous schist. It works very freely, requiring little more than the wedge and the hammer to reduce it to sizes very convenient for walks and roads. Occasionally it is mixed with considerable masses of amorphous quartz, either milky or crystalline, which in some cases is finely incrustated with mica. Very little granite is to be seen on that side of the mountain. The crumbling nature of this rock renders great attention to the road necessary ; for large masses, disengaged either by frost or incumbent snow, fall from the mountain above and injure or obstruct it.

18th. We left Simplon at six, in company with Col. Allen, and Capt. Cotton, two English gentlemen, who lodged at the same inn with us, and who had been travelling for some time on the continent. They reside in London. The former is member of Parliament for Berwick on Tweed, a borough of which he has been long the representative. He was concerned, I was told, in the taking of Seringapatam, in Asia. Captain Cotton has been also in the East India service. We were enveloped in fog for some time in our descent, but, as in America, it proved the precursor of a bright, sunny day. The descent of the mountain afforded more interest, by the variety and boldness of the scenery, than the ascent. Among the truly picturesque objects of this road are the *galleries*. These are openings for carriages cut through the solid rock, in situations where there was positively no space between the perpendicular projection of the mountain and the chasm below, for a road or platform to be made. There are six of these galleries on the Simplon route, the longest of which is 200 metres, or about 650 English feet. Three wide openings are perforated through its sides to admit light. The galleries are at least as wide as

the road, (which is 25 feet French, or nearly 27 English) and 30 feet high. The crack of the coachman's whip, rang with deafening sound in this extended cavern. In issuing from it, we immediately cross a bridge over a torrent, which pours its foaming waters into the river Doveria, and which, at this very spot rushes with thundering sound, among enormous blocks of granite, into a gulf below. In no part of the route, is the power of art so finely contrasted with the sublimity of nature, as in this spot. Thirty men, it is said, were employed night and day, (relieved every eight hours by as many others,) during eighteen months, in effecting this prodigious gallery.

It will be easily understood, that to construct a good road on the side of a steep mountain, a wall must be erected on the lower side to support the platform; and that if durability be an object, these walls must be laid with stone and mortar. The quantity of masonry, indeed, in this route of the Simplon is immense. The wall rises a few feet above the level of the road, but we perceived that in several places it had been injured by avalanches from the heights above. Posts, ten feet high, are erected at intervals, to distinguish the road from the precipice, when the whole is deeply covered with snow. The bridges, (of which there are many,) are of wood, and very strong. The abutments are wrought in stone, at great expense and labour, and with true architectural skill. In descending, we passed along the valley of the river Variola, which empties into the lakes of Italy, and passed the barrier between Le Valais and Piedmont, which belongs to Sardinia, without much difficulty from the Douaniers. It was interesting to observe the industry with which every spot is cultivated on the south side of the mountains, where a lodgment could be obtained. Villages and populous settlements soon began to appear. On eminences too high for a winter habitation, chalets, or summer cottages are erected, where the poor remain during the warm season, to feed their goats, and gather a little hay. These chalets are seen in every part of the Alps, and some of them at an amazing height. They add much to the picturesque beauty of the scenery. The rock on this side of the Alps, differs essentially from that on the side of Switzerland. Slate indeed very frequently appears, but granite and limestone are the predominant materials. Several of the galleries are perforations through a hard granite, containing a large portion of quartz. We

passed a fine quarry of beautiful marble in our descent, whence some of the finest workmanship of Milan has been supplied. A single column, five feet in diameter and about forty feet long, lay by the side of the road ; having been destined for the triumphal arch of Milan, but arrested in its progress, like other things, as we are always told, " *par les événemens.*"

Arrived at length at the southern foot of this ridge of the Alps, the plain of Domo D'Ossola broke upon us with all the beauty of a new and elegant picture at the first drawing of the curtain. This plain is very extensive, and appears as level as a bowling green. Houses and plantations are thickly scattered on its border ; most of the former being covered with white cement. On entering the valley we crossed the Doveria, on the new and beautiful bridge of Crevola, which forms part of the improvements of this general route.

We could not leave the Simplon without feelings of admiration at the skill and the energy which have so completely overcome the most formidable obstacles, and established a far better communication between France and Italy, than any which had ever existed. Nothing which Napoleon has executed, will be regarded with more unmingled satisfaction, or furnish a more striking and durable monument of his public spirit.

In travelling through this plain, and indeed before we had entered it, a considerable difference was perceptible in the style of cultivation. The grape, instead of being reared, as in France and Switzerland, upon single stalks, and always confined by annual pruning, to the height of a few feet, is here produced upon vines trained upon horizontal espaliers, supported by slabs of gneiss planted in the ground and rising to the height of six or seven feet. Other crops, such as corn or millet, are introduced between the vine rows—a method seldom practised north of the Alps.

Domo D'Ossola is a town of respectable size, and the first we have reached in which the Italian language is spoken. We walked, while dinner was preparing, to a place called Mount Calvary, an elevation, which commands a fine view of the plain, with the town below, and a wide extent of improvement around. On the top are a church, an oratorio, and an old tower. We entered the church, and found it, like the last we were in, replete with images, crucifixes, gewgaw finery, and all the trimmings of Catholic

worship. Small chapels are placed at different stages of the mountain, containing figures of the natural size, and before which these people perform their genuflections, and recite their prayers. The figures represent the events of the trial, crucifixion, and resurrection of the Saviour. His persecutors are drawn, as might be expected, with ferocious countenances, and one of them, in order to render him as odious as possible, is made with a huge goitre. As we descended we met a priest, and a number of his followers, going up to mass. We were accompanied, in this pleasant little excursion, by Allen and Cotton, the former of whom sketches very handsomely. He showed us several views he had taken of the Simplon.

Our road, after dinner, conducted us through the villages of Pallanzano, Masone, and Vogagna, and along the river Toccia. Indian corn is one of the principal productions of the valley, and is now in a state fit for gathering. It is cultivated in broad lands or rows, with an intervening space, in which millet was growing. The corn appeared to have been sown on the ground, like wheat or rye, and dressed with the hoe or spade. At dusk we dismounted, for the night, at Fariola, a small place, on the border of Laco Maggiore, (chief lake,) the largest of the three lakes of Lombardy. I accepted the invitation of our English friends, to take tea with them, in their room, and the evening passed in interesting conversation.

19th. Our track, this morning, afforded high satisfaction, by conducting us along the edge of the beautiful lake last mentioned, the sides of which exhibited many of the luxuries of nature as well as the splendour of art. We passed, on the lake, a quarry of beautiful rose coloured granite, surpassing, I think, in richness of colour, the finest marble. At Baveno, a little village, we descended from our carriage, and took a boat, to visit the Borromèen islands situated, in the lake. They are three in number, the most remarkable of which is Isola Bella, (the beautiful island,) the residence of their wealthy owner. This island, by nature, was a barren rock of small extent, but by art and labour it has been enlarged to the dimensions of nearly a mile in circumference. Vast sums have been expended, to render it the seat of beauty and magnificence. A large palace, erected at one end of the island, is the residence of Borromèus, the present owner, who received the property by inheritance. We were conducted through the saloons and rooms

of the principal mansion, by the upper servant. The pictures, though numerous, did not appear to be above mediocrity. The lower suite of rooms is finished in the manner of grottos, in the richest and most fanciful taste. The floors, walls, and ceilings are formed of small pebbles, of various colours, inserted in stucco, and so arranged as to represent flowers, birds, men, and other creatures, in great variety. The pillars are covered with pieces of rough, calcareous tufa. The Mosaic effect of this ornamental work is extremely curious and pleasing. The largest of these rooms is the "Salle a manger,"* and a more cool and delightful place, for refreshing the appetite, contiguous as it is to the water of the lake, it would be difficult to find. The garden and shrubbery are altogether in the artificial style of former days. They consist of ten terraces, rising successively one above another, and decorated with fountains and statues. These terraces are entirely artificial, forming the successive stages of a pyramid, which has a base of 400 feet square, and rises to the height of 150 feet. The platform on the summit is fifty feet square. The terraces are supported by arcades, beneath which the more tender plants are protected during the winter. I saw here, for the first time, orange and citron trees growing in the open ground. Some of the former were a foot in diameter, and nearly all luxuriant in flowers and fruit, in various stages of growth. The gardener informed us, that he collected, annually, about 60,000 lemons. There are forty families residing on this island, as dependents of the signóre. The largest of the three islands is Isola Madre, also containing a garden, and a mansion, to which the owner often resorts. The servant informed us, that the princess of Wales had twice visited his master, at Isola Bella, and he pointed out the room in which she lodged. The third island is the abode of a colony of fishermen. These islands, were at first only naked rocks in the lake. They were purchased in 1673, by Count Vitalian Borromeo, who covered them with earth, and rendered them, by prodigious labour, what we now behold them.

The road along the lake is a continuation of the Simplon improvement. It is as smooth and substantial, and elegant, as one can well conceive a road to be, and is supported on the lake side by a wall of masonry, many miles in extent. The bridges are of granite.

* Dining room

The village of Arona, on the border of the lake, gave birth to Charles Borromæus a predecessor and relative of the present family. He was born in 1538, and in consequence of his extraordinary benevolence, and the sanctity of his life, he was canonized by Paul V. in 1605, and is now regarded as one of the most distinguished of the Italian saints. If the accounts published of him be correct, he was truly a remarkable character, living in extreme self-denial, and distributing his immense wealth in acts of charity and public improvements. A statue of him is erected on a high hill, near the town of Arona, which attracted our attention at a great distance. It is of copper, and is probably the largest statue in Europe. We did not ascend to it, but the dimensions given me, by Allen and Cotton, who stopped to examine it, are the following, very nearly :

Height	70 feet.
Length of the head	10 do.
Circumference of the neck	20 do.
Length of nose	2 $\frac{1}{4}$ do.
Length of the arm	28 do.
Do. fore finger	4 do.
Length of the breviary, or book, which he holds	10 do.
Width of the book	4 do.
Length of the foot	4 do.
Height of the pedestal of granite, on which it stands	36 do.
Cost of the statue	\$150,000.

Six men, it is said may dine together in the head. One arm of this colossal figure is raised, and points to a school, which "San Carlos" established for the instruction of eighty boys. This remarkable statue was erected at the joint expense of the inhabitants of the vicinage and of the Borromæan family, and was inaugurated on the 10th of May, 1698, by the archbishop of Milan.

The waters of lake Maggiore are discharged, through the river Ticino into the Po, and thence into the Adriatic sea. Arrived at the outlet of the lake, we crossed the Ticino in a large floating vehicle, made by throwing a platform over two boats. We drove on it without getting out of our carriage and it was drawn over, by pulling at a rope which was stretched across the river, and passed through an opening in a post attached to the boat. It is a clumsy contrivance, and very slow in its motion. On the other side we landed in the town of Sesto, in Lombardy, and were of course

within the dominions of Austria. A *douceur* was paid to the Sardinian officers on one side, for suffering our baggage to pass unexamined, and another to the Austrian, at Sesto, for the liberty of writing our names in a book which was presented to us, agreeably to a form prescribed by law. We dined at Sesto, and proceeded through a tract of country which possessed but little to interest us, except its connexion with the robberies of which it has often been the theatre. Our *voiturier* related to us some of his own narrow escapes, and the disasters which had befallen others. The government has used great vigilance and activity in suppressing the brigandage that has been so long an abomination to Italy, and it is now considered quite safe to travel any where in Lombardy in the day time. The night, however, contrary to our expectation overtook us, and excited apprehensions, which were at length agreeably expelled by the lights of Gallarate, a town, where we were to repose till the dawn of another day. The two English gentlemen arrived soon after us.

20th. We were waited upon, at the inn at Gallarate, by the daughter and son of the innkeeper, whose appearance and manners gave us a favourable prepossession of Italian customs. At parting they came to the carriage, and took us by the hand with the expression of much good will. The morning was very fine. The sun rose with brilliance, and gilded the lofty summits of Mount Rosa and other peaks of the Alps, which lay behind us. This last named mountain, is very little lower than Mount Blanc, and constitutes one of the grandest features of the southern side of the Alps. Our way was directly through the plains of Lombardy, apparently as level as the ocean. The process of irrigation is carefully attended to in this country, the elevation of the streams as they issue from the mountains, affording the means of accomplishing it in great perfection. The inclination of the plains is very gradual, yet sufficient to produce an easy and uninterrupted flow of the water. It is conducted in channels along the roads, and thence into the fields, and distributed through furrows, or small courses, (which are opened or shut at pleasure,) to the places required. While the horses were feeding at Rho, a large town, about nine miles from Milan, we walked to a church called Notre Dame des Miracles, which belonged formerly to the college of Missionaries, now suppressed. It is a large and beautiful building, and displays great taste, both

L. Courtes

in its exterior and interior finish. The priest was officiating before the altar, with an auditory of not more than half a dozen persons, and those, judging from their appearance, very poor. A woman came and knelt before the altar, without the railing, and a lad placed himself in a corresponding position on the other side of the passage. The priest advanced to the altar, kneeled, and bowed to the image, opened a little door, bowed again, took out a cup, bowed before it, opened it, bowed again, took out a large white wafer in each hand, retreated from the altar, bowed to the image, then advanced to the woman and put the wafer in her mouth, repeating, at the same time, a sentence in Latin, implying that he administered to her the body of Christ! The same process was renewed with the boy. After receiving the wafer they remained some time on their knees, and then withdrew. The countenances of these poor people, indicated great devotion and sincerity, and I have little doubt that they swallowed the wafer, and the Latin too, all in good faith; but if I might be allowed to judge, from the manners of the young priest, his credulity was not quite of so easy a character. We ascended to the top of the tower of this church, and enjoyed a delightful prospect of the plain, with the city of Milan on one side and the Alps on the other, threefourths of the horizon remaining entirely unbroken by the least variation from a level. The number of villages and spires, of gardens, villas, and richly cultivated fields, which decorated this immense plain, particularly on the side next the lakes, and in the direction of Como, surprised us all. The whole spectacle was of a novel character, and charming in the highest degree.

We entered Milan about ten o'clock, and drove to the "Pension Suisse," which being already full, we proceeded to the Albergo San Marco, and were well accommodated. Having dined, we called upon several persons whose names had been given us, but found none of them at home. Our cicerone led us to the cathedral, and we availed ourselves of the remaining light of a clear bright evening, by ascending to the top, and taking a bird's-eye view of the city. The ascent of 520 steps was a work of some labour, but we were well repaid by the rich and vastly extended scenery around us. The sun went down behind Mount Rosa, with a splendour I have never seen surpassed, gilding with its declining beams one of the lofti-

est and grandest of mountain elevations, and heightening the brilliance of one of the most elaborate structures ever raised by human hands—the vast cathedral beneath our feet.

LETTER XVI.

Genoa, 10th month, (October) 23, 1813.

MY DEAR ***** AND *****,

AT six this morning, (the 21st,) we went to the hospital, a very large and well regulated establishment, and were introduced into a spacious interior square, around which were different wards and other apartments of the institution. This square opened again into others, there being in the whole eight of them, but of less size than the first. It appears to be customary for the physicians and surgeons of the continental hospitals, to pay their visits at an early hour in the morning.

We were conducted to the wards without delay, and found the doctors engaged in their visits. I addressed the principal surgeon; stated to him our country, the motives of our visit, and the pleasure we should derive from any information he might be pleased to give us. He immediately gave some directions to the young men in attendance, and obligingly walked with us through all the rooms and wards, that we wished to see. The hospital is large enough for the accommodation of 3000 patients; but at present, they have but 800. The bedsteads are of iron, and without curtains, except a very few, and these were plain and simple. The medical patients are separate from the surgical; and there is a distinct ward for diseases of the eye. In one of the female wards, were one hundred and ninety beds. This room is in the form of a cross, with an altar, at which mass is occasionally celebrated. Crucifixes are to be seen suspended in different places, in most of the hospitals I have visited, and pictures, or prints, of the virgin and child, placed at the head of a bed, are very common. Another ward contained sixty-four beds; indeed, they are mostly very large. The male patients are attended by male nurses, and the women by females, taken from the foundling hospital. We were shown a lad, of not more than twelve, who had three times undergone a lithotomic operation. The kitchen is extensive, and the cook and assistants, are taken from the foundling hospital. The apothecary's

shop is large, and apparently well arranged, and the laboratory contained an ample set of utensils, for the various pharmaceutical operations. In addition to these, we were shown a pretty large room, well provided with a suite of furnaces, a forge, and a cabinet of chemical preparations, reagents, &c. all destined for a course of lectures on pharmacy, to the students of the town. This hospital holds a distinguished rank in Italy. It appeared to us to be well attended to, and the patients kept in tolerable comfort ; but it is not in that state of perfect neatness and order, which we have noticed in some other institutions.

Surgeon Moriçi next conducted us to the Foundling Hospital. After some hesitation, (for strangers are not generally admitted,) the doors were opened to us, and we were attended by an active, and very talkative matron ; but as she spoke only Italian, Moriçi interpreted for us, into French. There were about three hundred children in the house, of both sexes, and various ages. Many of those, who can work, are lodged and fed here, but are sent into the town to work, at such places and arts, as may be found for them. When we first entered the hospital court, we met a large number of the boys of this charity, going out to work, with each a piece of bread. This hospital receives, without inquiry, all the children that are brought to it. The poor little creatures, who are thus abandoned to the wide world, by unnatural parents, are brought to the wall of the hospital, in the night, and placed in a cradle, lined with leather, which is contained in a round box, that revolves on an axis, one half projecting beyond the wall, outside. The infant is laid in, and the box is turned round ; this rings a set of bells ; the attendant immediately comes, and delivers the child to the nurse. In one room, were children of the tenderest age. They were incased in swaddling clothes, like little mummies, leaving only the head at liberty. Each wet nurse has two, and she lifts them about with one hand, like a little girl her dolls. But as there is not a sufficient number of wet nurses for all the children, one apartment of the institution is consigned to those who are to be brought up by hand. Of these, we were informed, upon inquiry, the greatest number die within the first year. They are fed on a decoction of barley and milk, which the child takes through a small sponge, attached to the spout of a cup, or small teapot. Not less than three thousand, were brought to the house, in the course of 1817, but it was rather an ex-

cessive number. I asked Moriji, if he did not think such institutions had an unfavourable effect upon the public morals, but he did not seem to be aware that it had ; at least he believed, that the ultimate effect, was favourable to humanity. But in this I differ so decidedly from him in opinion, that I should greatly regret to see such an institution set up in the United States. There is no reason to fear, however, that this will ever be the case, for the public voice, I am persuaded, would be almost unanimous against it ; and that, too, on the firm ground of morals, religion and humanity. There are none, I believe, in England ; at least none upon the principal of indiscriminate admission, adopted here and in other large towns of the continent. In some of the rooms, children from four to eight or ten years of age, were collected for instruction in knitting and sewing. In the nurseries for sick children, we noticed a very large proportion of diseases of the eye, and of scrofulous cases. The hospital, at Milan, is supported by funds in its possession, which are increased by contributions and legacies. Upon the whole, we were convinced, that these institutions, though established and supported at a great expense, are not so well inspected as they ought to be.

The attention we received from Professor Moriji, was more than perfect strangers, without any introduction, had a right to presume upon. He remained with us about two hours, during a fatiguing march, up and down stairs, from room to room. He appears to hold a respectable rank in his profession, but I should judge from his conversation that he is not altogether free from the too general infection, of the *odium medicum*. I am at a loss to determine, upon what principle it is, that this moral malady, so common among physicians, is to be accounted for. Dr. Rush once told me, that he had a dispute with Dr. Priestley, relative to the *odium medicum*, and the *odium theologicum*. Each contended for the superior aggravation of his own professional disease. Lawyers, I believe, live upon as good terms with each other, as with the rest of the world.

After breakfast we went again to the cathedral. To describe this edifice properly, would require a small volume. The exterior is entirely of marble, not excepting the roof, or at least only a part of it, which is still unfinished. Such a profusion of sculpture is perhaps no where to be seen as the outside of this edifice presents to the eye. Most of

the prominent incidents of the Old and New Testaments, are here attempted to be described, in marble figures as large as life. The architecture is Gothic; and though the building was commenced in 1386, it advanced so slowly, that even the front was not completed, till the city of Milan came under the sway of Napoleon. He went boldly to work, and had very nearly completed the original design, when the labours of the workmen were again arrested "*par les évènements.*" They are now resumed, and nothing remains unfinished but the roof. There are, it is said, in this grand Duomo, 1200 statues. Every pinnacle or spire is surmounted by a statue; every niche and projection, is ornamented with a statue, and every pannel contains figures in alto relievo. In magnitude, this cathedral yields only to St. Peter's in Rome. It is nearly of the same length as St. Paul's in London, but in width much superior. Its interior elevation under the dome is 258 feet, and its exterior height from the pavement to the summit of the tower, 400 feet. The chancel is entirely open, and separated from the nave only by its elevation. The pillars which support the roof are in clusters, and more than ninety feet high. It is perhaps the only edifice of the kind built entirely of so elegant and durable a material: being paved, vaulted, and roofed with white marble, from near lake Maggiore. Upon the whole, in point of materials, costliness, and embellishment, this edifice, may, in all probability, be justly ranked as the second in Europe, and of course in the world. Nevertheless, this splendid specimen of architectural skill, has been, I think, justly objected to by travellers, as producing too great a confusion of objects. Its effect upon the mind is that of grandeur, rather than pleasure,—magnificence, rather than elegance,—of power, devoid of the simplicity of true taste. Of the ornaments of the interior, the most imposing are the tomb of St. Charles Borromeo, and the pictures which illustrate the events of his life. We were conducted into the tomb. It is an octangular cavity in the central part of the cathedral, immediately under the dome, and sufficiently spacious to contain twenty men. The coffin is formed of pieces of rock crystal of extraordinary size and of the finest polish, inserted in silver frames. It was given by Philip IV. of Spain, who was eight years in search of crystal, before he procured a sufficient quantity. The body is clothed in the robes which the deceased wore when Archbishop of Milan, decked with numerous jewels,

and the dark and shrivelled face of the "Saint," is the only mortal part exposed to view. Around the sides of the tomb, are superb representations, in massive silver relief, of the principal events of his life, beginning with his birth, and ending, (of course,) with his apotheosis. The hangings of this subterranean chapel, are of gold cloth, and the architraves of the doors and cornice are of solid silver. The cornice is supported by large statues of angels, adorned with alto relievos of silver. From the roof of the coffin hangs a small cross over his breast, formed of emeralds, a rich present from Maria Theresa, of Austria. The tomb is covered with an open grating of wood, and around it in the church, is an iron railing or enclosure, which the pious or the curious may approach, in order to get a glimpse of the splendid receptacle of the body of a man, whose motto, while living was "Humilitas," and whose life actually exhibited a most extraordinary example of self-abasement. With what severity of censure does that single word condemn this pompous display of monumental extravagance? The pictures which are suspended between the massive pillars of the cathedral, are also devoted to the memory of this illustrious member of the Borromean family. Their execution is not above mediocrity. The design of them is different from those of the tomb, but the events they illustrate, are nearly the same. This extraordinary man was the nephew of Pius IV. He became a cardinal and archbishop at twenty-four years of age. Though born to the inheritance of almost unbounded wealth, and the highest dignities, and with talents which soon raised him to great eminence in learning and accomplishments, he not only escaped the intoxication, so natural to a youthful mind in such circumstances, but devoted his life, with the steadiness of a Christian hero, to the spiritual and temporal welfare of his diocese. The occurrence of a raging pestilence in Milan, did not induce him to forsake his post. He erected a hospital, and fed the victims of disease with his own hands. He died at the age of forty-six; but his memory lives in the imperishable records of history, and needs not the splendour of mausoleums to preserve it in the affections of the Milanese. If, indeed, such a monumental display could induce others to emulate these virtues, then marble, silver, and jewels might not be lavished in vain.

We called to pay our respects to Monti, a person who is considered as holding the highest rank among the living Ita-

lian poets. He received us complaisantly, sitting in bed, dressed in a gelet, and with a frame before him, covered with books and materials for writing. He is rather an old man, but of still vigorous intellect. The conversation was general. He spoke highly of Sismondi, and was glad to hear from him. The poetry of Monti is considered by some, as worthy of being placed next to that of Petrarch and Dante. His writings have generally a political bearing, and he is accused of being always in favour of existing authority.

We took a fiacre, for the purpose of viewing a few things, at some distance from the town. First, the amphitheatre. This is a large place, called the *Naumachia*, erected in the reign of Bonaparte, for the purpose of public entertainment. It comprehends about two acres of ground, of an elliptical form, surrounded by a wall. In the centre is an elliptical excavation, about four feet deep. Around this the ground slopes to the wall, and is formed into seats, rising successively above each other, covered with turf, and capable, it is said, of containing 20,000 spectators. An elegant building is erected adjacent to this theatre, with beautiful columns of red granite, and with steps of granite descending to the basin. This building is for the accommodation of the grandees who attend and regulate the spectacle. When all is ready, the floodgates are opened, and water rushes in and fills the basin to a convenient depth. Boats are then introduced, accoutred for sport and games of various sorts.

Second, The echo. The attention of strangers is deservedly directed to this curiosity. It is merely an old country palace, now abandoned, consisting of a large front and two wings extending in the rear, to the depth, probably, of sixty feet; the walls of these wings are perpendicular to the front. They are smooth and entire, except a single window, at a considerable elevation, in one of the wings. When a noise is made at this window, the sound is audibly reverberated about sixty times. Some of our company were able to count at least fifty-six repetitions of the sound of a pistol, which was fired by the attendants. The experiment was several times repeated with similar results. The distance of these walls from each other, I should judge to be 150 feet.

Third, The triumphal arch of Bonaparte. This was in a state of great forwardness, when the masons and the sculp-

tors were obliged to desist "*par les évènements.*" It is placed exactly at the termination of the Simplon road, and at the entrance of the city. The sculpture appeared to me, to be the finest specimens of modern skill; and if completed, some portions of this arch would certainly be regarded as most elaborate pieces of workmanship. But the image of the conqueror is too apparent among the figures, to admit of the belief, that the numerous elegant alto-relievos, which are held under lock and key, in the coarse shops around the arch, in which they were formed, will ever be placed triumphant, on their pillars, without a material change in the Lombardian government.

Fourth, The Cenacle, or Last Supper, of Lionardo da Vinci. This celebrated picture is executed on the end wall of a long room, of the convent of Madonna delle Grazie. Though in a state of decay, it still retains enough of the spirit and animation of the painter, to render it an object of the greatest interest to an amateur. The figures are somewhat larger than life. When the monks were turned out of this convent by the revolution, this picture was exposed, through utter carelessness, to the weather, and received material injury. The surface of the wall has become loose, and is gradually peeling off. The painting is 324 years old. It has been so often copied and engraved, that the arrangement of the figures, and their respective attitudes, are well known to every lover of painting. An imitation of this picture in Mosaic, is in a state of forwardness in this city, by Raffaelli, a professor of that ancient art. On the wall opposite to the picture of the Supper, is a painting of the crucifixion, by D'Oggione, also much admired. The principal buildings of this convent are now used as horse barracks. There was a variety of elegant paintings in this room, at the time of our visit, for sale, and from the prices attached to them, I could not but think, that an American academy might be supplied on very moderate terms.

We took dinner at a "restoratore." The articles of the bill of fare were much the same as those of France. Grated cheese is always placed on the table, to be added to the soup.

Very few women are to be seen in the streets of Milan, in comparison with the cities of France, or even of England. We have been accosted by no beggars.

22d. This morning we visited the zecca, or mint, and

had explained to us, the various operations of melting, rolling, cutting, weighing, and stamping the coin. The stamping machine makes about 1000 impressions in an hour. The machinery being moved by a water wheel. Gold is more plentiful here than silver, and it is a singular fact, that the likeness of Napoleon is still stamped upon the money now coined. It is the impression of 1814. A great deal of work is done at this mint, but, it is mostly for individuals. We were shown several cabinets of dies, containing all those that have been in use since the institution was erected. The ancients struck their coins with a hammer, by hand, as is evident from the shape and appearance of the die. They preserve carefully also, patterns of all the medals that are struck at the mint, and the collection is interesting in a historical point of view. The buildings of the mint are situated around an open square, and are airy and convenient. In one apartment, they were washing silver ore, obtained near the lake Maggiore.

After returning from the mint, we called upon Count Moscati, who was a senator under the former government, a physician of high repute, and a man of letters. He is now advanced in years. He reproached us for not staying longer in Milan, than he found it was our intention to do. After treating us to chocolate, he conducted us through a long suite of apartments, containing his library, and his instruments of Natural Philosophy and Chemistry. The collection is a remarkable fine one for that of an individual, who pursues science for the pleasure it affords. His apparatus is chiefly from Paris and London, and many of the instruments are of nice and costly workmanship. His laboratory is large and well constructed, and his chemical utensils more extensive than those of some public schools. The bellows of his forge is of wood, very neatly made, and with appendages which adapt it to the production of a current of air to a lamp, or table furnace, any where in the room. Among his chemical preparations was a beautiful *Arbor Dianæ*, produced by supporting a small quantity of mercury, contained in a leather bag, on the top of a glass rod, attached by cement to the bottom of a bottle containing the nitric solution of silver. His library is very extensive, comprehending the best works of science in most of the languages of ancient and modern Europe. It includes a very large collection of tracts or pamphlets, bound up in the order of time. Among them I noticed Dr. Franklin's *Poor Richard*,

in Italian. He has likewise a collection of the Paris *Moniteur* from the beginning of the revolution. He showed us several splendid works on natural history. Being himself in feeble health, his servant conducted us to the Italian Institute, of which Moscati is the director of the class of science. The building which this institution occupies was formerly a convent of Jesuits, denominated the BRERA. It is of astonishing size, and in a beautiful style of architecture. The staircases are uncommonly large and fine, and the colonnades are of granite. We were first conducted to the observatory, which occupies several rooms on the top of one quarter of the building. The instruments are of English, French, and Milanese workmanship, numerous, and most of them in fine order. Among them, are five or six telescopes well mounted; one of which is a transit instrument, eight feet long, and a reflector fifteen feet long, with about ten inches aperture, but not mounted. Some of the telescopes are on stone pillars well supported below, and protected by moveable roofs, with lateral and vertical openings. There are mural quadrants also, for fore and back observation. Astronomical clocks were in movement in various parts of the observatory, and in one apartment was a lunar globe in mounting, with a small terrestrial globe attached to it. This observatory is well situated for astronomical research, having a charming sky and a very fine horizon. It constitutes part of the academical arrangements of the university of Pavia. The library, into which we were next introduced, occupies many large rooms, and contains, we were told, at least 200,000 volumes. It is scientifically arranged. In the English department, is a complete collection of the London Philosophical Transactions, and most of those of Philadelphia. It includes part of the library of Haller, which, with his herbarium, was purchased by the emperor, for 2000 louis d'or, and divided between this city and Pavia. In the room appropriated to the fine arts, were prize essays in drawing, painting and sculpture, done with extraordinary taste and neatness of finish. The collection of statues is not large. I noticed a fine marble bust, *tres ressemblant*, of our friend Count Moscati. The modern pictures are not very numerous, but in the rooms appropriated to ancient paintings, is a rich feast, indeed, for the connoisseur. He will there meet with some of the finest works of the great masters of the Italian school. Some of the pictures are very large. It was late when we

went in, and the attendants were anxious to go to their dinners, so that we were obliged to make only a rapid excursion through the rooms, and without taking time to examine satisfactorily a single piece.

23d. We called again this morning at Moscati's, for a letter of introduction to Pavia, which he kindly offered to furnish me with. The porter gave me two, one to myself pointing out the objects most worthy of attention, in Milan, and assuring us of his regard; and another to Professor Configliachi, of Pavia. But as the porter had directions not to let us go, without informing him, we were again introduced to the venerable philosopher, sitting in bed. He would not let us depart, without a cup of chocolate, and a little more conversation, on subjects of science. He spoke in high terms of Dalton and Henry, as chemists. In reference to the former, "*dites lui,*" (said he to my companion, B. D.) "*non seulement que je le lis, mais, que je l'étude.*"* His letter informed me that he is in his seventy-eighth year.†

Having left our names yesterday, at the rooms of Acerbi, known to most readers as the author of travels to the North Cape, and as the editor of an Italian journal of literature, we called upon him this morning, and were received with the frankness of a man acquainted with the world, and knowing the wants of travellers. He is of middle age, tall, with a comely countenance, and a dark and lively eye. We conversed in his library upon various topics, in English, which he speaks unusually well for a foreigner. He very obligingly agreed to conduct us to any part of the city, and proposed a visit to the prison, or *Maison de Force*. Though not a manager of the institution, he takes an interest in its condition and progress. We were admitted without hesitation, and conducted through the apartments, by one of the officers of the house. This prison was established long before the French revolution, but much improved, in its general regulations, during the Italian reign of Bonaparte. Like most of the public institutions we have seen, it includes, besides a large front, several interior square courts. There were, at the time of our visit, 432 prisoners, only 44 of whom were females. The latter are kept entirely out of sight of the male prisoners. When they meet in the chapel together, at mass, once a week, a screen separates them. The rooms are large, and are preserved in a state

* Tell him that I not only read him, but that I study him.

† Moscati, I am informed, is now deceased.

of cleanliness, well worthy of imitation. The prisoners are all kept at work. The only employments practised, are those connected with the manufacture of different kinds of cloth and stuffs. Those who have not been accustomed to this labour, soon learn to spin, twist, and even to weave. Labour is introduced more for the purpose of preventing the evil effects of idleness, and as the means of reformation, than as a relief to the expenses of the prison. When this prison was under French control, one third of the gains went to the house, one third was paid monthly to the prisoners, and the remaining third was given them, at the time of their discharge. This regulation has been annulled by the Austrians, and the whole of the gains now go to the house, the labour being compulsory.* The effects of this change, the conductor informed us, is bad. The prisoner, at his discharge, having no resource, and no character, too often commits a crime, in order to get back; whereas, it was common for them, formerly to leave the prison after five or six years confinement, with three or four hundred francs. The Austrian system, is much disliked by the keepers. The boys, or younger convicts, are, in this prison, kept by themselves, a practice worthy of all imitation. They receive, every day, two hours instruction in learning, and in religion; but, unfortunately, (as I think,) their instructor is a priest, who has been several times immured in the house, for petty crimes. How much better to have a teacher, against whom there is no such imputation. Some of the working apartments of the prison are very large. In one of them, were 220 persons, mostly engaged in spinning and weaving; but the room is divided into recesses, which, in some measure, obviates the objection to too free an intercourse with each other. One of the rooms is called the hard prison. It receives the worst convicts, and serves also as a punishment to the refractory in the other rooms. In this apartment, their privations are greatly increased. Their bed is only a slanting board, without either straw, or a pillow of any sort, and their food equally coarse. Their legs are kept constantly chained together, they sleep two in a room, under lock, and a guard is continually stationed to watch them. In this apartment, there were fifty-six prisoners. The general system of this institution is lenient. The more orderly go out on the

* The female prisoners are, however, allowed a certain sum per day; about one third, as I understood, of common out door wages.

business of the house, to market, &c. but always under the eye of an attendant. The female apartments, resembled more those of a decent work-house, than of a prison. The chief nurse of the infirmary, is a woman, condemned, as a commutation for death, to twenty years imprisonment, for the murder of her husband, a crime which was committed at the instigation of a priest. Nineteen of the twenty years have expired, and her conduct in prison has been very exemplary. The infirmary in point of cleanliness and comfort looked better than the wards of some hospitals we have seen. Besides mass, the prisoners attend prayers, twice a week. In taking their meals, they do not place themselves at table but go down into a court in companies, receive it in bowls, and eat standing in the court, or seated on benches, under cover from the weather. Acerbi informed us, that the writings of Beccaria have had great influence in producing a more lenient and consistent course of management, in the prisons of Italy.

He next conducted us to the School of Mines, where a person in attendance, opened to us a cabinet of minerals, of tolerable extent, though not in the best condition. The Ichthyolites were the largest, finest and most numerous, I have seen in any collection. They are from Monte Bolca, in the Veronese territory, a locality which has supplied many of those in the cabinets of Paris. Elephant's bones are also found there, a great number of which are deposited in the school at Milan. This institution is provided with a pretty good library of books, on mineralogy and chemistry.

The next institution to which our friend Acerbi led us, is called *Il Pio Albergo Trivulzi*, or the pious hospital of Trivulzi. It is an asylum for poor people, who have attained the age of seventy years, and have not the means to support themselves. It was founded in 1771, by Trivulzi, a wealthy citizen, and is supported by funds left by him for the purpose. This curious and interesting institution contains 550 of these *Septuagenaires*, about one half of whom are women. The number is always complete, there being, as we were informed, no less than from 600 to 800 candidates on the list for admission, when a place is vacated by the decease of any one of this family of ancients. Among them are some above 100 years old, and several above 98. About one quarter of the whole number die annually. They are fed and clothed, as well as lodged, without cost to the public. The men are dressed in a plain, but decent and

respectable style, and all alike. In walking among them, and observing their general health, and the ease and comfort in which they live, we could hardly avoid the belief, that we were in a family of ancient worthies, whom brotherly concord had collected into one domestic circle, and whose temperate and pious lives had qualified them to

"O'erleap this narrow vulgar span,
And live beyond the life of man."

They are not obliged to labour, but many of them prefer employment, and occupy themselves with spinning, weaving, and knitting. A few, when the weather is good, work in the garden. The women voluntarily engage in spinning, and some of them in making lace. They all eat in one large room, which was formerly the stable of the benevolent owner. Their breakfast and dinner consist of bread, soup, and wine. We found, in the female department, a woman who was a native of Yorkshire, England. She was confined to her bed by infirmity, but conversed with us, in English, with much earnestness and pleasure.

The collection of books, paintings, and statuary, called the Ambrosian library, next engaged our attention. This is a celebrated and very interesting collection. It was founded by Frederigo Borromeo, nephew of San Carlos, whose wealth and extensive connexions enabled him to obtain, from various parts of the world, literary works, and curiosities in art, of high value. Among the busts and figures are some fine copies from Michael Angelo, and in the room of paintings, is one of the cartoons of Raphael,—THE SCHOOL OF ATHENS. The colouring is very plain, but the spirit of the design, and the dignity of the whole piece, appeared to me very impressive, and I could scarcely avoid the belief that it must be faithful to nature. This picture was carried to Paris, by Bonaparte, but was returned with other stolen treasures, at the general pacification. The King of France offered 100,000 francs for it, without success. There are various small pieces in this room, of very fine execution. The library contains about 40,000 volumes. Though inferior in size to many we have seen, it is more remarkable for containing a great number of rare and antique books and manuscripts. It is questionable, indeed, whether there is any collection in Europe, so rich in this kind of treasure; and it is only within a few years that its value in ancient manuscripts has been duly estimated. A learned monk, of the name of Angelo Mai, has recently discovered (as we

were told by the librarian) a greater number of unpublished and interesting manuscripts of the ancients than the city of Herculaneum has furnished, since its ruins have been explored. Several of these he has clearly made out, and published. Among them are five or six orations of Cicero, a work of Dyonisius of Halicarnassus, and a book of Isocrates, written on parchment. We were shown Petrarch's copy of Virgil—the whole written out in his own hand. It is a vellum book, of common folio size ; and the writing is executed with singular neatness, and with a great deal of ornament. It is enriched with the notes of the writer, which are curious and interesting. He states, in one of them, that he had that day attained his thirty-fourth year, in consequence of which he placed his own likeness at the head of a book ; and he proves by this miniature, that poetry and painting are not incongruous arts. A Latin copy of Josephus was also shown us, written on papyrus, in the second century, and reputed to be the oldest manuscript in the world. It is very tender.*

We left our friend Acerbi, with sentiments of great regard, and of gratitude for his kind attentions.

24th. We prepared this morning to leave Milan ; and, from what I have observed of it, I may acknowledge that I esteem it the handsomest city I have seen in Europe. The houses are built of brick and stone, but all plaistered on the outside, and they preserve their white and cleanly appearance. The streets are in general of tolerable width, and some of them large and elegant. The pavements are peculiar. The materials, mostly employed, are small rolled stones, but in the middle of the streets are two rows of broad flat stones for the wheels to run upon, which give an easy motion to the carriages, and effectually prevent noise. The houses are high, and a large proportion of them elegant. The females are much more retired here than in France. During the forenoon, but few, comparatively, are seen in the streets. Their dress is neat, differing very little from that which is common in our American cities. The Milanese ladies, (judging from those I saw,) would not be placed in the rank of the beautiful, either in England or America ; nor would they occupy a very low station in the scale of personal charms. They are of good size, and neat

* The Abbé Maſ has since removed to Rome. He has discovered, among the ancient manuscripts in the library of the Vatican, a number of interesting productions, unknown to the moderns.

in their persons. Their complexion is that of a delicate and pleasing brunette, with dark and lively eyes. Their manners appeared to be easy and graceful.

Mendicity (at least that of the streets) is scarcely known at Milan, in consequence of recent police regulations, which confine the indigent to parish work-houses. The system of mutual instruction has not been introduced, though we were informed by Acerbi, that it is now a subject of conversation in the town. The poor, however, are taught at the public expense; so that it is rather uncommon for a child to go without an education. There are many private schools in Milan, but they are much more influenced by personal and artificial distinctions, than in America, or even in England.

The population of Milan is about 130,000. Its principal trade is in grain, rice, silks, and cheese. The latter is chiefly of the kind called, in the country, *de Grana*, but the term *Parmesan* is given to it in many other places. The commerce of the town with neighbouring districts, is effected very much by canals. The city is surrounded by a double wall, which has a circuit of about nine miles. Many of the trades are conducted each in a distinct quarter. In one street there are more than a hundred jeweller's shops; some of which are extremely rich, affording an evident proof of the opulence of the city.

Having engaged a *voiturier*, to take us to Genoa, for nine Napoleons, (three each,) and to furnish us with provisions as before, we left Milan, at seven, with no company but our own. The road lay upon the side of a large and very fine canal, called the *Naviglio*. As the country, through which it extends, is very level, we saw but few locks, but those appeared to be exceedingly well constructed. From this main canal, water courses are carried into the fields, and distributed, so as to produce an ample irrigation in dry seasons. The mulberry is extensively cultivated in the plains of Lombardy. The road along the canal was in the best order. An Italian gentleman joined us, for a short distance, at a village, through which we passed, and we found him a pleasant agreeable man. He stopped with us at the village of Certusa and we walked to the church of *la Chartrreuse*, an edifice which attracts the curiosity of numerous travellers. It constitutes part of a celebrated monastery, situated about three miles from Pavia, and at some distance from the high road. We approached it through a wide and beautiful avenue of tilias and poplars, which ended in a

spacious court, with a superb front of the church in white marble, full before us. This convent, one of the richest in Europe, was suppressed by Joseph II. of Austria. It supported but twenty-six monks, each of whom had a neat little habitation, containing several apartments, and a small garden. These dwellings are connected together, round a square area, each opening into a corridor or piazza. The church of the convent, "Maria de la Grazie," is one of the very richest in Europe. Besides the principal altar, at which the priest officiates for the benefit of spectators assembled in the grand aisle, there are, next the walls, seventeen private compartments, with each an altar and altarpiece. In all these, as well as in the main building, are fine and costly paintings. The richness of the building consists (in addition to its marble architecture) in the wealth lavished upon the altars. Besides the finest marble, of almost every variety which Italy affords, precious stones, of the most elegant hue and polish, are used to decorate this temple of *private Christian worship*! They consist chiefly of carnelians, agates, and the lapis lazuli, and the principal altar has the noble garnet, finely crystallized, distributed among the other gems. In a retired part of the building is an altar, formed entirely of ivory derived from the hippopotamus, and exhibiting finely wrought, carved representations of the principal events of the Old Testament history. The inscription on this church, is "Mariæ Virgine Matri filie sponse Dei" It serves at present, I believe, no other purpose than as a place where mass is said to a few peasants, and as an object of curiosity to visitors, who naturally wish to stop half an hour to look at this splendid monument of monkish extravagance and superstition. By the suppression of this monastery about £20,000 sterling per annum passed to the government.

On our approach to Pavia, we passed the ruins of a park of twenty miles in circumference in which the famous battle was fought between Charles V. and Francis I., which ended in the total overthrow of the latter monarch. The captured king, it is said, was taken to the Abbey of Certusa, and entering the church while the monks were chanting the one hundred and nineteenth Psalm, he immediately joined the choir in the seventy-first verse—"It is good for me that I have been afflicted; that I might learn thy statutes."

We arrived at Pavia at ten o'clock, and after dining, called to deliver our letter of introduction to professor Con-

figliachi, who is also vice president of the university. I received, at the inn, the unpleasant intelligence of the death of Brugnattelli, professor of chemistry ; who died about three hours before our arrival, after an illness of a month. Not finding Configliachi at his lodgings, we took a garçon, and were conducted to the public rooms of the university. The first object of our attention was the museum. This occupies a very large apartment and contains a remarkably fine collection of objects in natural history, all accurately classed according to the Linnæan system. In the animal kingdom, it is very rich and valuable, containing, besides the animals in their perfect state, a great variety of *lusus naturæ*. A lamb, with one eye in the centre of his forehead ; a dog, with two heads, three eyes, and four hind legs ; a double egg ; a goose with two heads, and four legs ; a large and perfectly white peacock,—were among the deviations from the order of nature. I noticed the *Palamedea Cornuta*, a bird of Cayenne, with a horn of considerable length at the elbow of each wing, and another large horn on the head. A large hippopotamus, an elephant, and several other animals in good preservation occupy the central parts of the room. In entomology, the collection is remarkably rich, more especially in aquatic insects. The minerals fill two or three rooms, one of considerable size being consigned to the metals alone. In the principal room, there is a double collection,—one on the walls arranged according to Linnæus, and one in the centre on the system of the Abbé Hally. Among the specimens of asbestos, are two large gloves made of that material. They feel very heavy and cold when put on the hand.

The university is indebted for this large and valuable museum, chiefly to the industry, zeal and talent, of Spallanzani, who was its professor of natural history. This great naturalist died in this town, in 1799.

The library of the university contains about 85,000 volumes, including most of the splendid works published in France during Napoleon's sway. The anatomical museum is in three apartments, viz. comparative anatomy, human anatomy and pathology, and surgical instruments and bandages. Two full sized wax figures, male and female, illustrative of the whole system of circulation, made by Fontana, in his first rate style of neatness, grace this collection. The anatomical theatre is semicircular, with a lofty ceiling and wide and convenient seats. The walls and ceiling of

this room, as well as most of the others, are painted in fresco. The dissecting room attached to the theatre, is ample and commodious.

We called at five on Configliachi, and found him at home. He occupies rooms in an old convent. The first into which we were introduced, contained a long table, apparently for billiards ; an amusement at which, it is probable, the professors relax a little from the severity of science, though I can affirm nothing positive on this head. He received us affably, and entered immediately into an easy and communicative style of conversation in French. He is about thirty-five, tall, and with an open countenance. We spent half an hour, and accepted an invitation to breakfast with him the next morning.

25th. At eight we waited on Configliachi, and took a breakfast on "café au lait," after which he conducted us to the cabinet of natural philosophy, in the university. He showed me several numbers of the scientific journal, published by himself and Brugnatelli, and spoke of the death of the latter, as a great loss to the university. The apparatus chamber is very large, and, after going through our examination of the collection, I must acknowledge it to be one of the best, for practical purposes, I have yet seen. The instruments are not in that style of splendour, and show, which distinguish some of the Paris collections, but they are, I think, more multiplied, and more generally adapted to science. They are preserved in glass cases, of chestnut wood, the top of each case being marked with that branch of physics which the apparatus it contains is intended to illustrate. The optical instruments are very various. One room is appropriated to optical experiments, being painted black, and having but one window. A pair of double bellows, were shown us by Configliachi, contrived by himself, by which inspiration and expiration are alternately produced, by the same act of blowing. They are intended as an improvement on the instrument commonly used in cases of asphyxia. The lecture room for natural philosophy, is a handsome apartment, well-seated, and with painted walls and ceiling. On one side of the room, is a statue of Gallileo Gallilei, and the figures of Newton and Franklin are exhibited, in bas relief. In a room below, Professor C. showed us the apparatus used by the teachers of the principles of engineering. It contained large models of canals, with locks of different kinds, pile engines, hydraulic

machines, &c. On taking us into the room for examinations, "voilà," said he, "ou on forge les docteurs."* This university is large, and in high repute. The number of students that annually attend, is from eight hundred to a thousand. As in most of the colleges and universities on the continent, they do not live in common, but board in the town. The professors are divided into three faculties: *First*, **LEGALE POLITICA**, including the principles of commerce, navigation, statistics, political economy, and civil law. *Second*, **MEDICO-CHIRURGICO-FARMACEUTICA**; and *Third*, **FILSOFICA**. In the first of these faculties, there is a professor of civil and criminal law; a professor of the statistics of Europe in general, and of Austria in particular; a professor of rural economy; a professor of Roman law; a professor of ecclesiastical law; a professor of the universal civil law of Austria, and of the difference between it and the French law; a professor of the mercantile law of Austria: a professor of political science, with an explication of the Austrian penal code; and a professor of the practice of courts, notaries, &c. In the second faculty, there is a professor of the introduction to the study of medicine and surgery; a professor of human anatomy; a professor of mineralogy; a professor of botany; a professor of zoology; a professor of comparative anatomy, and physiology; a professor of chemistry, general, animal, and pharmaceutical; a professor of general pathology, causes and symptoms; a professor of dietetics, pharmaceutical symbols, and materia medica; a professor of the introduction to, and the theory of surgery: a professor of theoretical obstetrics, and exercises with the obstetrical machine; a professor of theoretical and practical instructions upon diseases of the eye; a professor of special therapeutics, of internal diseases, and of clinical medicine; a professor of veterinary science; a professor of legal medicine and medical politics; a professor of physiology, general pathology, and therapeutics; a professor of practical and clinical surgery; and a professor of remedies for asphyxia. The third faculty, comprehends a professor of religious instruction; a professor of the theory of philosophy; a professor of the elements of pure mathematics; a professor of universal history; a professor of the Greek language; a professor of experimental and general physics; a professor of practical and

* Here is where the Doctors are forged.

moral philosophy ; a professor of the higher Latin classics ; a professor of the history of the Austrian states of Germany and Italy ; a professor of natural history ; a professor of Greek philology ; a professor of *pedagogia* ; a professor of the higher mathematics, or sublime calculus ; a professor of physico-mathematics ; a professor of architecture ; a professor of mathematical astronomy ; a professor of integral and differential calculus ; and a professor of idrometria and geodesia. This very remarkable course of instruction, is conducted by thirty-three professors, only one of whom occupies a station in two distinct faculties ; but some of them must, of course, hold several stations in the same faculty. I know not what some of the great universities of Germany may do, in the way of a sub-division of human knowledge, but if the students of this school, do not turn out learned men, it will not, I think, be for want of a *classification* of the objects of their pursuit. I have extracted the list from a printed paper, of the present year, given me by Configliachi.

There are several emeritian professors, some of whom reside at the university. Of these, three are directors, viz. Tamburini, of the faculty of law ; Scarpa, of medicine ; and Volta, of philosophy. It was with much regret I learned, that in consequence of the existing vacation of the school, the two latter directors were absent from Pavia. Volta was on a visit at Como, his former residence. To have seen men of so much distinction, in their respective departments of science, could not fail to increase the number of a traveller's agreeable recollections. In consequence of the recent death of Brugnattelli, the laboratory was not accessible. It is at present at some distance from the university, but measures are now in hand, to establish the chemical rooms within the walls, and in an improved form. The buildings of this large institution, are conformable to the very general arrangement of hollow squares, with corridors, next to the court, in every story. There are four of these courts within the enclosure of the university. This adds greatly to the pleasantness and convenience of the rooms, though it must, I think, be a much more expensive mode of building, than that of one or more detached and compact houses. There are, besides the university, several colleges in Pavia. One of these was established by a former Pope, and contains accommodations for 160 students. We visited another, founded by Charles

Borromeus, and which is called after him. This college contains a large hall, the ceiling of which is painted in a flourishing style of design and colouring, all in honour of San Carlos. Thirty-six students only, are educated in this institution, but they are clothed, lodged, fed, and instructed entirely by the funds of the college, and in a building which, from its size and convenience, might easily accommodate thrice the number. A third college, which we did not visit, contains eighteen students.

Attached to the university is a hospital, which, on the morning of our visit, included 277 patients. We found it in excellent condition, the patients well classed, and the wards and other apartments, clean and comfortable. The kitchen and laboratory appeared to be managed with superior judgment. Attached to the latter, is a lecture room, in which instruction is given to the students in pharmaceutical chemistry. The furnaces and chemical apparatus appeared in good order. The soup made in the kitchen was improved by the grating of the bread, the machine used for this purpose being simple and ingenious. A wooden box contains a cylindrical grater of tin, which turns by a winch and handle; the loaf is stuck upon a wooden bar, and pressed against the grater by the action of a heavy weight, which can be lessened or increased at pleasure. The operation is very expeditious and effectual. There is also a good library in the hospital, in the chamber of which is a tableau, executed under the direction of Scarpa, exhibiting the appearances of the eye, in all the forms of disease to which it is liable.

Pavia contains about 22,000 inhabitants. It is an ancient but handsome town. Several high towers remain in it in good condition, the relics of Gothic taste. They are applied to no important use, nor is it easy to conceive, for what purpose they were designed.

We set off for Genoa with an addition of four or five passengers, who had arrived from Milan in the morning. We crossed the river Tessin, or Ticino, on a long, covered, wooden bridge. This river, which communicates with Milan by the canal before mentioned, is too shallow to admit of any other navigation than boats of moderate size. Rice is cultivated in large quantities in the neighbourhood of Pavia; the facility of irrigation and the general level of the country, contributing essentially to the means of its production.

Soon after crossing the river, we entered the Sardinian territory. Our passports were again examined, and our journey was retarded nearly an hour, in consequence of a box of merchandise, which belonged to one of the passengers. It appeared, at this place, that two of our company were inhabitants of Florence; one was a Genoese, another a Swiss, and a third a trader, who spoke Italian, French, and German. One of the Florentines was a Count Petro ~~Pasqua~~, a man of about thirty-five, and the other his *cara amica*, whom he was conducting to Genoa. She was older than himself, but of a singularly clear and blooming complexion, and a bright dark eye. She spoke French fluently, her *cicisbeo* not so well. The Swiss was a pleasant young man from Nyon, who had resided some time in Italy, and was occupied chiefly as an agent for commercial houses.

We crossed the river Po about three o'clock, on a bridge of boats. The country along its border is flat and not fertile. There is no village, nor even a single house at the bridge, except a habitation on the middle of it, which serves as a lodging for the toll-gatherer. The river is so wide, as to require fifty-three large boats for the support of this bridge. These are placed abreast of each other, and fastened by chains to smaller boats, which are anchored at a short distance up the stream. The banks of this river, at least in the neighbourhood of this bridge, have nothing of that picturesque character which is so commonly ascribed to Italian scenery. We saw nothing that would justify the second line of Pope's couplet,

O'er golden sands let rich Pactolus flow,
And trees weep amber on the banks of Po.

We reached Voghera, a frontier town of Sardinia, about dark, and found good quarters. My friends and myself took a room, where we had a fire and supper to ourselves; not finding in the conversation of our stage company, any thing to compensate for the loss of an evening, which might be devoted to our books or pens.

26th. We were called up at half past three. The country continued to be level, and notwithstanding the long continuance of dry weather, water was percolating the fields through artificial furrows and preserving the ground sufficiently moist for a lively vegetation. There were more women at work in the fields than men. The labouring men, or at least the poorer sort, in all the parts of Italy that we

have travelled through, go bare legged. They wear breeches but no stockings, frequently with shoes, but often without. This mode of dress gives them a mean appearance.

In the course of this morning's ride, we passed very near the plain of Marengo, where was acted one of those high tragedies, with which Bonaparte so often amused and flattered the great nation. The play of Marengo was highly glorious, for it placed the iron crown on the head of the chief actor. Fifteen thousand Austrian subjects left upon the field, and a corresponding number of French, was part of the exhibition; but what was that, to the joy felt in Paris at the possession of the iron crown! But where are now the crown, the actor, and the glory of the triumph?

"Sic transit gloria mundi!"

Our road led us through Tortona, a pretty large town, where was formerly, a very strong fortification and a garrison of 10,000 men. The fortification no longer exists, and the garrison is dispersed, leaving the town, in my opinion, safer than it was before. But it will be long, probably very long, before nations will be convinced that a hostile attitude only invites aggression, and that the art of war is but the art of self-injury or self-destruction.

From Tortona we travelled many miles upon a road constructed by order of Napoleon. It showed the same attention to stability and permanency, which characterises his other improvements of this nature. The inhabitants of this part of the country, and indeed those of Tortona, are swarthy and badly dressed. There is a manifest difference between their appearance, and that of the inhabitants of Austrian Italy, which is much in favour of the latter. Figs were seen this morning growing in the open ground. The principal crops are wheat, rye and rice. We dined at Novi, a pretty large town, with high houses and narrow, dirty streets, but we were furnished with a good dinner, and good attendance.

The Appenines presented themselves to our view on leaving this place, and the road very soon became rough and hilly.

The villages through which we passed, exhibit nothing of the cleanly and comfortable appearance of our American country towns. In the article of comfort, these people are at least a century behind the United States. Is it possible that the bulk of a nation ought to ask its king, whether they

are to be happy or wretched? The fault is certainly not in the soil or the climate. Fruit is raised in abundance and exposed for sale in great variety at every place. It appears however to be within the reach of very few; not because it is dear, but because there are so many who have nothing to buy with. We had this day a curious, but perhaps not an uncommon, specimen of manners, strictly Italian, in the conduct of Count Petro ~~Pascoe~~, and his *amorousa*. It was marked by the most devoted attention on his part, and an almost incessant prattle on hers. Nothing but the melodious accents of the Italian language, which operates upon the ear like music, could reconcile us to such company. However, one of the advantages of a public carriage, is the lesson which it affords, in the practical knowledge of our species. This woman had left a husband in Florence, and with his consent was taking this journey. She had a son grown up, and holding a place, as we were told, in the pope's life guards; and yet was she travelling through the country with this count, apparently, from no other motive than that of pleasure! We passed Gavi, a town at the foot of the mountains; and, as the night was beginning to close upon us, arrived at Voltaggio to lodge.

27th. We departed early, and had a long ascent. These mountains are different in their features from the Alps, more broken, much more devoid of stratified rocks, more conglomerate, as if heaped up in haste, or formed by some tumultuous deposition. This part of the Appenines appears, too, to be less productive of grass, than the valleys of the Alps.

It was not far from noon, when, reaching the summit of the Bochetta, one of the highest of the maritime Appenines, we obtained a full and fine view of the Mediterranean, with several ships under full sail, moving upon it. The sight greatly animated our spirits, and stimulated our imaginations, for here we were certainly on classic ground. The road being extremely rough, we walked a long distance down the mountain. At Campomarone, a little village, we stopped to dine, but alas for our mountain appetites,—it was St. Simon's day; and to try the fidelity of his believers, it was ordered that they should abstain from meat. Our inn, therefore, could afford nothing but eggs and fresh anchovies, with coffee and bread and butter. The anchovies being to me, in their fresh state, a new dish, I was willing, for once, to conform to the calendar, and have nothing to do,

with either beef, mutton, or pork. The dishes, especially the anchovies, were good, and we fared, probably, quite as well as those who paid no regard to saints. On leaving this place our Italian count got into a furious passion with the Genoese passenger, for not leaving the seat the latter had occupied in the cabriolet the whole journey, and allow him to take it, that he might be along side of his *dulcinea*, who had chosen to place herself in front, and ride, for a while, independently of her gallant. But his jealousy would not suffer this. He ordered the man from his seat, which the latter refused to comply with. He then directed the lady to come down; and after many remonstrances, she thought best to yield, and resume her station in the coach; but he was so highly offended as to refuse to get in, and we set off without him. He walked sulkily along, for some time, till one or two of the passengers, out of compassion for the woman, got out and tried to sooth him. He came up, and burst out again into such a fit of passion at the unoffending passenger, that had not the others interfered, he would have thrown a large stone at his head. He became more calm by degrees, and at length got into the coach. Such was the conduct of a man bearing the title of count; and such is the dominion of passion, when it is suffered habitually to overstep the bounds of morality. Near Campomarona, we passed the little river Polcevera, and travelled on an excellent road, made at the expense of the family of Cambiaso, when a noble of that family was Doge of Genoa. We met, on this road, an astonishing number of mules and asses, conveying goods from Genoa, in large boxes suspended on each side of the animals. Excepting liquors and groceries, the transport of merchandise from that town to the interior, is effected on the backs of these diminutive creatures. The valley of the Polcevera, and the vicinity of Genoa, are extremely interesting from the number of large and elegant country houses of its wealthy citizens, and the picturesque situations in which they are placed. On the top of a high hill is a church dedicated to "*Notre Dame del Mare*." Thither the sailors and ship owners, who believe in the protection of the saints, climb, to prefer their supplications for the success of their adventures on the boisterous deep. To propitiate more effectually the favour of the Virgin, the seamen often bring presents to her shrine, of some part of their cargo, or of ropes, blocks, old sails, and other moveable parts of the ship!

The sea, as we approached it, was quite calm. The lighthouse, a high tower, on the brink of the water, is a conspicuous and beautiful object, and the view of the city of Genoa, as we advanced along the shore, was truly grand. It is built at the bottom of a bay, from the circumference of which, rises in rapid ascent, an amphitheatre of abrupt and high hills, which art has converted into gardens, and ornamented with houses, many of which are elegant and sumptuous. It is surrounded by two walls,—one enclosing the city only, within the circumference of six miles; while the other comprehends a number of hills, villas and fortresses, and has a circuit of thirteen miles.

We passed the gates without difficulty from the *gend'arms*, a franc from one of the passengers, being sufficient to convince them that it was unnecessary to unlock our trunks and examine their contents. At the *Hotel de Londres*, situated immediately on the bay, we were accommodated with a good chamber in the seventh story.

LETTER XVII.

Marseilles, 11th month, (November) 3, 1818.

MY DEAR *****,

AT Milan the air was so cool as to render a fire in our chamber necessary to comfort; but we enjoyed, this morning (the 28th,) the mildness of a fine day in spring. Having engaged a *cicerone*, we called first on an English merchant, who has been some time settled here, and to whom one of my companions had a letter of introduction. He lives in a kind of palace,—a house with a large interior court, a wide and lofty staircase, and numerous rooms. Of these large buildings there are many in Genoa. He received us politely, talked of trade, informed us that he had once travelled from Genoa to London, by post, in eight days, though detained ten hours in Paris, and finished by inviting us to dinner the next day.

At the house of De la Rue, a banker, where I had occasion to call, we were informed of a steam-boat, then at Genoa, and bound in a few days to Marseilles. She was built at Naples, and was intended for a passage boat on the borders of this sea. We went to look at her, with a view of embracing so unexpected and favourable an opportunity of pursuing our route, if the boat should appear in good con-

dition. The engine, we found, was English, and managed by an English engineer. The accommodations, though far inferior to those in American steam-boats, were not such as to prevent us from deciding upon a passage in her, if nothing further should occur to oppose it. We called on Dr. Moyon, with an introduction from Acerbi, of Milan. His brother; to whom he introduced us, is professor of chemistry in the university, and keeps a *Farmacia*, or druggist's shop, in a degree of neatness that we thought worthy of remark. His articles were classed according to their composition, under four principal heads; *Metalli*, *Simplici*, *Acidi*, and *Alkoholi*. The doctor and professor both accompanied us to the university, a large building in the centre of the town; formerly a college of Jesuits. We ascended, on entering, a flight of wide marble steps, with two statues of large lions crouching at the foot, as if to support the massive weight of the staircases. They exhibited to us the philosophical apparatus—a tolerable collection, though trifling compared with that at Pavia, and inferior indeed to several private collections in America. We were introduced in the college, to Viviani, professor of natural history, a gentleman of modest pretensions, but of much scientific merit. His cabinet of minerals, though of recent preparation, bids fair to become respectable. The university has, at present, about 150 students; sixty of whom are in the medical class. It comprehends four faculties, viz. Science, Law, Medicine, and Theology.

We spent half an hour in a reading room, provided with French and Swiss newspapers, and a few literary journals. A small newspaper, printed in Lausanne, (I believe daily,) has a very extensive circulation in the southern parts of Europe, from the sensible, moderate, and judicious manner in which the editor notices the political features of the passing moment. In a trip to the light-house this afternoon; we had, from the water, an interesting view of the town; and of the mountains around it. With "weary steps, and slow," we ascended to the lantern, and feasted our eyes on the charming scenery. The sea was calm; the sky clear, and the air mild and refreshing. Dolphins were sporting at no great distance from the base of the tower; and numerous small boats were moving on the surface. Savona, the town in which Columbus was born, could be discerned in the western horizon, while toward the east, the city, with its

hundred palaces, and its fine gardens, was spread like a map before us.

On our return, we stopped at the palace of Doria, whose family fills so important a space in the records of Genoa. It is a large building, but without any marks of exterior elegance.

29th. Dr. Moyon conducted us, this morning, to the hospital, celebrated for its architecture, and the number of patients it usually contains. It is a fine building, with wide marble stairs and columns. Upon entering, we were struck with the great number of statues, larger than life, placed in elevated and conspicuous places along the walls. They are the representatives of those benevolent persons who have contributed liberally to the funds of the institution. The statues of those who gave to the amount of 100,000 livres (about £2,800 sterling) are placed at their ease, in a sitting posture, while those, whose purses were not quite so long, or hearts more narrow, are condemned for ever to an erect position. These huge statues, figuring like giants in a castle, are badly executed in marble, and have become so black with dust and smoke, that it would be difficult to say whether the benefactor was a Moor or a Christian, but for the Catholic place in which he is deposited. The general appearance of this hospital soon convinced us, that there was a great deficiency in the attention it receives from its managers and nurses. Cleanliness is much neglected. The beds are placed in a double tier, with very little space between them. The house contained about 1000 patients, at the time of our visit, but the number sometimes swells to two and 3000. Only seven of the sisters of charity are engaged here, the other nurses being hired. It is attended by four physicians and four surgeons, with their assistants. It is supported in part by legacies, the deficiency being made up by government. The cases taken to this hospital are all considered as remediable. One apartment is appropriated to wounds arising from accidents—a regulation which we found to exist also at Milan. This gave rise to a mistake, in one very respectable English traveller, who, in his published journal, relates, that in the hospital of Genoa, one room is assigned to those who have been wounded with the stiletto; and he adduces it as an evidence of the deplorable state of morals in that city. We next visited the hospital for incurables and insane. It contains,

in the whole, 700, whose condition, in general, denotes the absence of judgment, cleanliness, and tenderness. It includes seventy male lunatics, and a greater number of female. Forty of these poor creatures were chained down in their beds, and seldom allowed the use of their limbs, or the enjoyment of fresh air. It was the most affecting and disgusting bedlam I ever saw. In one room were 300 of the incurables, some of them exhibiting the most appalling maladies which flesh is heir to. - A considerable proportion of these are children. The inattention and neglect, apparent in these hospitals, are ascribed, by most persons, to a dereliction of order and principle, consequent upon the political changes of the country, and the introduction of a feeble, and, at the same time, a bigoted government. The effect of this change is felt, in all the institutions of Genoa.

This town is the only seaport of any consequence in Sardinia, and yet its commerce receives no protection, no fostering encouragement from the government. The university languishes for want of the aid which a liberal and enlightened policy might give it; and fears are entertained, that the building which it occupies, will, ere long, revert to the Jesuits.

We visited in our walk, the old temple of San Stephano, in a low and damp situation, but remarkable for its altar piece, the stoning of Stephen, by Raphael, and his pupil Julio Romano. The figures are singularly expressive, especially the savage fierceness of the ruffians, who are in the act of casting enormous stones upon the dying martyr, whose resigned and pious looks bespeak the mild, but irresistible force of the faith for which he died. The upper part of the picture, is an attempt to represent the celestial benediction upon the devotedness of this Christian hero. The countenance of the Saviour, whose arm is stretched out toward him, is replete with the most animating benignity.

We accepted to-day, the invitation of our English friend, Thomas, to dine with him. His wife was confined by indisposition to her chamber, and mostly to her bed. But as the company of strangers who could converse in the English tongue, was not very often to be enjoyed in Genoa, we were invited into her room. She is young and handsome, and from her style of conversation, possesses a mind more than usually brilliant. She was suffering from a protracted and obstinate cold, which affected her nervous system, and was attended with cough. Notwithstanding the mildness of this climate,

colds, and even consumptions, are not unusual. Several persons were invited to dine with us ; and it was something of a treat to us, to sit down once more to a table in the English mode. The fish of the Mediterranean are considered as excellent. Provisions, and living in general, were stated by the gentlemen present, to be less than one half of the usual prices in English towns. A partner of our host had recently removed here from England with his family, and had taken a house with seventeen rooms in it, for £24 sterling per annum.

The government of Sardinia, if we may judge from many facts presented to our notice, appears every where to be despised, and the country to be completely priest-ridden. The streets of Genoa, indeed abound with priests and from their looks, one would certainly imagine that they live much to their liking. They have a robust and contented air, and are, upon the whole, both here and in other places, a set of unusually fine looking men. There are more Capuchins in Genoa, than I have any where else met with. Their dress is a coarse coat, or mantle, of gray cloth, feet bare, except sandals, no covering on the head, and a belt or string round the waist, from which is suspended a rope, with a knot in its lower end. This is understood to be for the purpose of self-flagellation, in order to expel the wicked one, when they find he is about to assault their spiritual house. But, if the information communicated at our table to-day be true, (and it was presented in no questionable shape,) the knots of these monks are often too soft, and altogether insufficient for the purpose of repelling the enemy. In short the opinion is common, that the actual lives of these people, are, in a certain sense, extremely immoral. The Capuchins profess and possess, a great degree of ignorance ; but ignorance is, certainly, not the pledge of virtue.

I was sorry to learn, that though there are fifty English inhabitants in Genoa, they have no settled worship, and but little true society is maintained amongst them. Their principal object being the gains of trade, in which pursuit they are rivals, they suffer frivolous jealousies to divide them, and to cut them off from one of the highest of all earthly blessings—the enjoyment of loving, and being beloved, by those with whom we are connected.

We were surprised to see in the hospitals and in the streets, so much of the small-pox, notwithstanding that vac-

ination is offered gratis to the poor. But the difficulty was explained when we were informed, that the monks oppose the progress of vaccination, and propagate the opinion, that, as God sent the other disease, it ought to be submitted to. Our informants are fully persuaded, that the state of society in Genoa, is in a rapid retrograde movement, and that it has already gone back more than a century; an effect, altogether to be ascribed to the late political changes. Though I am aware that great allowances are to be made for the bias of political opinions, there are proofs of the justness of these conclusions, to an extent greatly to be regretted.

Many of the streets of Genoa, are too narrow for any carriage to pass, except a wheel barrow, and yet these are places of populous and busy resort. One of these narrow passages is appropriated to goldsmiths and jewellers, and glitters from one end to the other, with the riches of their various ornaments. A taste for finery, is an evident and striking trait in the females of this ancient republic.

30th. Our guide conducted us this morning to the school for the deaf and dumb, an establishment containing about twenty boys. Their principal instructor, Ottavia Giovanni Battista Affarotti, is a learned monk. As our visit was necessarily short, from the want of time, we saw the boys only in the school room. They performed before us an exercise which was really surprising. A question in Algebra was given to three of them, involving three unknown quantities x , y , and z . On a large black board, the conditions of the question were written down by them, from the signs or gestures of the teacher, and each of the boys in succession, deduced the values of the letters; the first found the value of x , the second with the aid of that, found the value of y , and the third that of z . They were sometimes a little puzzled or disconcerted, but were rectified by the motions of the monk, who appeared vexed, I thought, at their dulness. If this was not a hackneyed question, as we had no reason to suppose from what appeared, it evinced the wonderful precision, with which the most abstract knowledge can be conveyed to the deaf and dumb. We were about to depart, when the good monk requested us to wait a few minutes longer. He asked my name, and on taking my card, he held it concealed in his hand, and directed one of the boys to write my name on the board. The intercourse between them was altogether by signs.

They first wrote *Monsieur*. He next told them to write the name of the apostle that was the most beloved by our Saviour. They immediately wrote, *Jean*. He then told them to put down the fifth letter of the word which expressed joy. They wrote the letter G, and under it, to show how they obtained it, they wrote *allegresso*. Next they were told to join the last letter of the name of the most celebrated of the Roman conquerors. R, was added to the G, and the word *Cesar*, put underneath. Then, the second letter of the name of the king of animals. I, was placed along side the R, and *Lion* written below. Then, the first letter of the term for wisdom. S, was attached to the I, and *sagesse*, written. The first letter of the name of the ferryman that conveyed his unwilling passengers over the Styx. C, and *Caron*. The fourth letter in the name of the patriarch that had a stone for his pillow. O, and *Jacob*. Lastly, the second letter of the last discovered quarter of the globe. M, and *America*, were in like manner written. My name was thus in full, and with wonderful dexterity made out. The countenances and manners of these children, bespoke great mental activity and inquisitiveness; and I never witnessed an exercise which so clearly demonstrated the power which mind possesses over mind, under circumstances so unfavourable to the development of its faculties.

Some of the streets of Genoa are remarkable for being occupied on each side by nothing but houses of so large a size and so richly furnished as to vie in splendour with many of the palaces of Europe. The Strada Nuova and Strada Balbi, are not excelled, I should imagine, by any two streets in Europe, for the uniform magnificence of their buildings. They are mostly painted on the outside, with ornamental figures, and some of them of no mean execution, giving to a whole street, a scenic effect that is truly imposing. We stopped at the Palace de Serrar, and were admitted by the porter into two or three of the principal apartments. The nicely waxed floor, the profusion of gilding, the numberless reflections from the mirrors, extending from the top to the bottom of the rooms, the finely painted ceilings, the richness of the furniture, tapestry, &c. are all calculated to awaken the vulgar gaze, and either to put simplicity to the blush, or to excite the natural and reasonable inquiry, of what use is all this prodigality of wealth? Does it contribute to the dignity and happiness of man? In

this street, we were more beset with beggars, than we had been any where else in our journey. Some of them were almost naked, and extremely pertinacious in their demands for charity. Such a contrast, between the sumptuousness of a city, and the extreme poverty of many of its inhabitants, is, perhaps, no where so striking, as it is in this place.

Our steps were next directed to the *Albergo de Poveri*, or hotel for the poor; a large building, situated on high ground, and rather remarkable for the taste, as well as strength of its architecture. It is a general work house, and from its extent, one would think it sufficient to relieve all the poor of Genoa from want, or, at least, from that pinching penury, which leads them to street beggary. This effect it probably would produce, if begging was strictly prohibited, instead of being, as it is, encouraged by the religious prejudices of the people. In the *Albergo de Poveri*, any person may present himself, and ask for employment; and unless there be something extremely unreasonable in the request, he is admitted into the house, fed, clothed, and lodged, and the balance of his labour, if any be due, paid him whenever he chooses to withdraw. The house contained, at the time of our visit, about 1100 women, and 400 men. The women were employed in spinning, weaving, embroidery, in making artificial flowers, and silk ribands. The rooms exhibited an interesting display of activity and skill. The men were engaged in weaving coarse stuffs, as tickings, &c. The amount of the labour falls short of the expenditures of the house, but in what proportion, I did not learn. The deficiencies are supplied by donations, and by government; and some of its principal benefactors are honoured, as in the hospitals, by having their statues placed in the hall and antichamber, either seated or standing, as their merits deserve. In the chapel of this large house, are a number of paintings, and a statue, by Michael Angelo, of the Virgin, supporting the dead body of Christ. It is in strong relief, and is considered as one of the most exquisite pieces of sculpture, ever executed by that great master of the art.

From this famous "tavern," we retired to our inn, dined, and prepared to leave Genoa. Professor Viviani called, and gave me several specimens of minerals of the neighbourhood, and signified his desire of a correspondence, on subjects of science.

The city of Genoa, certainly presents many objects of

great interest to the traveller, notwithstanding that it appears to have passed, long since, its meridian of prosperity. Its history, as is well known, is highly curious and instructive, furnishing a salutary lesson, with respect to the influence of governments, upon the morals and happiness of a people. Its position is exceedingly beautiful, and its climate that of an almost perennial spring. It is rare that snow falls, and water but seldom freezes in the streets, notwithstanding that its latitude corresponds with that of Lake Champlain, in the United States. The character of the Genoese, is reputed to be unfavourable to integrity and honesty. Craftiness at a bargain, and an avidity for gain, with but too little scruple about the means, are said to be characteristics of the citizens of this town ; but this remark, is by no means applicable to the bankers, and regular merchants. The women are not remarkably handsome. In the streets, they wear thin shawls, which hang over the head, and fall loosely down the back, with the corners folded round the arms. We had no opportunity of making personal inquiries, into their wit or knowledge, and, what is of higher importance, their domestic virtues ; but, presuming that they are influenced by a depressing system of faith and government, as well as the other sex, we should not have entered on the inquiry, with an expectation of finding any thing superior to the female accomplishment of England and America, but greatly the reverse.

The markets were amply supplied with the finest fruit, and in great variety. Fresh figs were plentiful. There was one kind of fruit in the market, we had never seen before, though it was cheap, and very palatable. It is of the size of a small plumb, covered with fine bristles, or down, which does not hurt the mouth. The colour is a bright scarlet red ; it is a very showy fruit, its substance is a soft farinaceous pulp, and its taste sweet and agreeable. Its trivial name, in the market, is *Corbazzola*. The plant is the *Arbutus Unedo*, (strawberry-tree,) an evergreen, common to the hills round Genoa, but rather rare in other places. It grows in the island of Corsica, where the juice of its fruit is converted into an agreeable wine.

Having taken our passage in the steam-boat for Marseilles, Dr. Sims, and myself, took leave of our companion, B. Dockray, who was going into the south of Italy : our parting was with mutual regret, for we had ever found in our friend, qualities, which rendered him a very pleasant and

intelligent fellow-traveller ; well acquainted with the history of the countries we were passing through ; full of enlightened curiosity, and zeal for information ; and, what is very important in one who journeys for instruction, an early riser, and of industrious habits.

In turning my face westward from Genoa, and relinquishing all prospect of visiting the splendid remains, of the great mistress of the world, and other interesting objects in the south of Italy, I have resolved to sacrifice inclination, curiosity, and pleasure, to considerations of utility—of professional duty. It will be impossible to extend my journey south, to Rome, Naples, and Vesuvius, without devoting six weeks, or at least a month, to these objects. I should thereby deprive myself of so much of some of the principal concerns which I had in view in leaving home—a visit to the schools of Paris, London, and Edinburgh, during the season of instruction, as greatly to lessen the advantages, or at least the satisfaction which I hope to gain, by spending the winter in those distinguished seats of learning.

On board the boat, we found a number of persons, attracted by a desire to see her works and witness their operation. About one half of these were women, some of whom remained on board a considerable time after we were under way. An old priest was also among those whose curiosity was thus excited. But, considering the novelty of such a spectacle, (this being the first steam-boat that had been erected on the Mediterranean,* and this her first trip to Genoa,) the number of those who came to visit the boat was very small. This was doubtless owing to the idea of danger, which, I found, was very prevalent, in relation to steam-boats. There were but two passengers from Genoa, besides ourselves. The boat was named *Ferdinando Primo*, her size was 264 tons, and the power of the engine, fifty horses. It was very obvious, at first setting off, that neither the captain, nor the superintendant for the owners, (who was also with us,) nor the crew, were possessed of much of that dexterity, and good management, which distinguish the movements on board of our vessels. A great deal of bustle ; loud and incessant talk, and evident confusion, together with a drunken engineer, were rather unfavourable prognostics, with respect to the safety of our voyage. Though they had been a fortnight in port, preparing

* With the exception of a steam-boat, which runs from Venice to Trieste, on the Adriatic. This boat belongs, I believe, chiefly to the American consul, at Trieste.

for this trip, the fuel was not all got in, till the moment of our departure.

The lantern of the tower, threw its broad gleams over the bay, as we moved out of the harbour, and night closed upon us, while the numerous lights of Genoa were glimmering visibly in our rear. Though this boat was intended chiefly, if not exclusively, for passengers, the accommodations for sleeping were very indifferent. With some difficulty, I procured a mattress, and at length fell into a sound sleep, on the bosom of that water which has so often been the scene of ancient and modern conflict ; of exploits which were sung by Homer, narrated by Tacitus and Livy, and swelled in the trump of fame by the eloquence of Cicero.

31st. I rose early and went on deck. The scenery was truly delightful, the sea calm, the sky serene, the air mild and balmy, and the mountainous coast, near which we were moving with an easy and steady pace, wore an aspect altogether enchanting, at the distance at which we viewed it. Many towns were in sight, mostly near the water, but some of them elevated among the hills. The sun rose with splendour, and I thought with uncommon beauty. One's feelings are sometimes attuned to the harmony of nature, with more than ordinary sensibility ; and when, at those favoured moments, the fancy and affections are in accordance with new and sublime appearances in the visible creation, we may mark such periods as the "sunny islands" in the unsteady ocean of human existence.

At nine we were served with a good breakfast of coffee, bread, butter, and eggs, by *Salvador*, our cook, a sleepy, dull looking Italian, but quite disposed, in his own time and manner, to oblige his customers. Our captain, Don Andrea Martino (which certainly sounds better than Andrew Martin,) was a man of an open countenance and modest manners. He had been a captain in the Neapolitan navy, and appeared to be respected and beloved by his crew. We moved through the water at the rate of four and a half, or five knots per hour ; but such was the interest we took in the scenery around us, there was little or no impatience felt from the slowness of our progress, though accustomed, at home, to move with double that speed. As we advanced, the coast became more populous. At one time there were no less than thirteen towns in view at once, some of them at very considerable heights. Several of those on the coast were surrounded with high walls.

Our progress against the wind and without sails, excited, to the highest pitch, the curiosity of those who gained a sight of us from the shore ; and from almost every town, boats pushed off, full of men, women, and boys, who rowed vigorously to overtake us, and to ascertain what and who we were. Few, if any of them, had ever seen a steam-boat before, and many of them had never heard of such an invention. The captain suffered none to come on board, but generally threw them a rope, and allowed them to keep along side as far as they chose. It was diverting to notice the eager gaze, and the incessant jabber, of these swarthy Sardinians. In several of the numerous boats which intercepted us, in the course of the day, an old priest would appear among the curious visiters, and if there was a danger of not coming up with us, these fathers would apply as lustily to the oars as any of the company. But it was remarkable that the captain would never throw a rope to a boat which contained a priest. I learned from him, subsequently, that he considered it bad luck to have a priest on board of his ship, and that he considered them as among the most worthless, if not the most corrupt people in the country. He told me afterwards that there were 30,000 priests in Naples, and that their conduct was well known to be extremely licentious. His estimation of this class of the community, had, it is probable, derived some of its colouring or bias, from his naval habits.

A great number of large porpoises appeared in the course of the morning. Many vessels were in sight, several of which were large brigs, but all much farther from shore than our boat. At two o'clock we refreshed ourselves with a cup of tea. The superintendent, Wolf, we found to be a man of mild manners. He is a native of Strasburg, and as we were told by one of the passengers, is a Jew. The two men employed as engineers, are both Englishmen, and both habituated to drink. One of them was almost constantly intoxicated, and they were generally at variance and quarrels. One of our passengers is a Genoese, inquisitive, shrewd, discontented with his situation, and with the government, and determined to come to America, were it not for the pain of leaving his mother. Another is an elderly Frenchman, residing in Genoa. He was in England fifty years ago, and had been much with the family of Fox's at Falmouth, and appeared to retain a great regard for them, and for the society to which they belong.

In the course of the day, we passed Monaco, a town and principality of Piedmont, very small, and very poor.

11th month, 1st. The sun rose this morning with the same mild lustre as it did yesterday, and the weather was again delightful. We were advancing, when I came on deck, about four and a half miles per hour, with the islands d'Hyeres just before us, and a good prospect of seeing our port before night ; but this flattering prospect was soon at an end. It was announced to us, that the fuel was nearly exhausted, and would not carry us much farther. This very unwelcome intelligence threw us into a dilemma, and our superintendent and manager was exceedingly embarrassed and knew not what steps to take. I advised him to steer for Toulon, which was at no great distance ; but it soon appeared that we had not sufficient to carry us, even thither. The only alternative, therefore, was to approach the shore at a small village, then in sight, called Saline d'Hyere, about a league distant from the town d'Hyere. This was resolved upon. As we advanced towards the village, there appeared no little commotion among the inhabitants. We anchored at some distance from the shore, and a boat at length ventured out to examine us. Others soon followed, containing militaires, douanieres, mistresses, maids, labourers, gentlemen of the village, boys and girls, all eager and prompt to see the sight, for we were now on the coast of France. They informed us, that they knew not what to make of our vessel, when they first saw her advancing, without sails, and against the wind, but, observing her at length coming toward the shore, and smoking rather unusually, the conclusion was, that she was a ship on fire, running in for assistance, and they were accordingly preparing, men and women, to get out their boats, and come to our relief, when they saw us quietly drop anchor. As to a steam-boat, they never heard of one. At one o'clock, we went on shore, to endeavour to procure some wood or fuel of some sort, but it proved to be a most difficult enterprise. There was wood on the shore, but it was destined for the construction of some of the salt works, and this being the first day of the week, the owner of it had gone abroad. The afternoon was therefore spent, without affording any immediate prospect of relief or assistance, at this place. Our manager proved to be very deficient in that kind of energy and address, which is requisite to the station he had undertaken, as the director of a new and important concern.

The people of the village appeared to be of decent manners, and tolerably well informed for their station. They were busy in measuring salt, and loading a vessel with it, notwithstanding it was the Christian sabbath. In this work, women were laboriously engaged, carrying heavy bags of salt on their heads, from the measurer to the boat. This salt is made by the villagers, from the water of the sea, by solar evaporation. It costs, in the manufacture, about ten sous per bushel; but the duty is thirteen and a half francs, just twenty-seven times the original value; so that the purchaser has to pay for it, fourteen francs per bushel. I recollected, with some degree of pleasure, that the salt manufactured at Salina, in Onondaga county, New-York, cost, when I was there in 1815, duty and all, but twenty-five cents per bushel; about one-tenth of the Mediterranean price!

2d. We were in the same situation this morning, as when we first dropped anchor yesterday, at noon,—no fuel, and not knowing how to procure any. We were told, moreover, as a farther trial of our patience, that the wood which the country afforded, was, for the most part, brought to the village, on the backs of mules. Our manager worried himself, by running hither and thither, without effect. In the mean time, Dr. S. and myself, with the Genoese passenger, resolved to turn the day to some account, and we set off to visit the salt-works of the village. We found the workmen willing and disposed to give us information.

The process of evaporation, as it is here conducted, is very simple. The ground, adjacent to the sea, being flat, extensive basins are formed, by making shallow excavations in the earth, of about four rods square, the bottom being carefully levelled, and pounded or rolled hard. Into these the water is admitted, at pleasure, from canals or ditches; which pass along side the area thus prepared to receive it. The evaporation goes on rapidly in dry weather, and when the brine has arrived at a certain degree of concentration it is let into another compartment, where the salt crystallizes, and settles to the bottom. When dry, it is raked up, as free from the earth or dirt as possible, and in this state it serves for coarse purposes, such as the use of cattle, pickling large meats, fish, &c. It is purified, for more domestic use, by dissolving it in a large reservoir, whence it is pumped, by horse power, into a very broad, shallow iron boiler, and again reduced by artificial heat.

The water, when exposed to the sun in the large basins, varies from two to four or five inches in depth. These works are upon a pretty large scale. The basins occupy a surface of twenty acres; and, though a large proportion is sold and removed in a crude state, the storehouse contained a very great quantity of refined salt. No advantage is taken here of the mother water, to obtain glauber's salt, as is done in New-England.

The present season has been very propitious to these salt-works; for such a continuance of dry weather has not been known for a long course of years. But the drought has been very injurious to another kind of industry, practised in this neighbourhood, viz. the orange gardens. In the neighbouring town of d'Hyerès, there is a plantation of orange trees, for the produce of which the proprietor has received 40,000 francs per annum. The trees are constantly in bearing, though the winter sometimes checks, and even destroys the crops. They have suffered much from the want of rain. The olive is also one of the staple commodities of this region. The hills, as we advanced along the coast, were covered with this beautiful plant; which, instead of being, as I had imagined, only a shrub, grows, in a good soil, to the size of our apple trees. The leaves are small, and of a pale green. The fruit is well known. It is gathered in autumn, and either pickled, or sent to the mill, for the extraction of the oil. The pulp which remains in the press, is valuable as food for cattle.

The salsola is also gathered in this neighbourhood, especially in the islands, and burned in shallow pits. It undergoes by the heat a kind of fusion, and is thus converted into a coarse article for soap-makers. It is a rigid plant, with a thick fleshy stem, and rather succulent.

The uncertainty we were in with respect to fuel, induced Dr. S. and myself to think of quitting the boat and pursuing our journey by land; but on representing our situation to a few gentlemen who had assembled at the village, we found we could not leave the boat, without subjecting the captain to the risk of a prosecution at Marseilles, unless our names were taken off the "rôle d'équipage," by the authority of a "Commissaire de Marine," and such an officer the village did not produce. It is but justice to say, that the gentlemen alluded to, who appeared to be some of the most respectable and wealthy inhabitants of d'Hyerès, were much interested for us, and politely offered, if we

insisted on leaving the boat, to stand in the gap between the captain and the law, as far as in their power. They were truly civil and obliging, and through their instrumentality, our manager was at length enabled to purchase the wood intended for a special purpose in the salt works, and about noon the sailors began to convey it on board. We accordingly determined to take our chance in the completion of the voyage. The report of the steam-boat had spread round the country, and so many persons had collected to view it, our captain had enough to do to wait upon them, and to show them the wonder-working machine. One fat old lady was much put to it, in descending the ladder into the dirty hole of the engineer, but on coming up she manifested the greatest pleasure, and extolled most highly "*la belle mécanique*." About sunset our wood was all on board, the steam was let loose, and we departed, carrying with us, for a short distance, a number of our curious guests, who left us at last with a profusion of bows and thanks, "*tres content*" with the "*joli petit voyage*" they had made by steam. The evening was delightful, and our wood appeared to answer better than the coal, in keeping up the force of the engine and driving us forward.

3d. The harbour of Marseilles was in sight this morning, soon after daylight. The entrance of the port is exceedingly romantic, with high hills on each side, and an island in front, which excludes the view of the town, until we arrive at the opening of the basin, around which the city is built. The sun peeped over the eastern ridge as we made our entrance into the harbour. Our smoking progress soon excited the gaze and wonder of the numerous pilots, fishermen, and others who were moving about in their light barks in the outer road. Several of them were speedily alongside of us, and if the effect of novelty and astonishment on the countenances of others, can give pleasure to the observer, ours was that gratification. We overtook a large sloop loaded with lumber, and the wind being ahead, they desired permission to make fast to us. This was readily granted, and others availing themselves also of the liberty, we passed the fort and entered the town with a long train at our sides and heels. The shore, the quays, the windows of the houses, and the heights around, were quickly lined with spectators, eager to witness our appearance and motion.

The port of Marseilles is strongly fortified next the sea. The basin, in which the ships lie, is in the heart of the

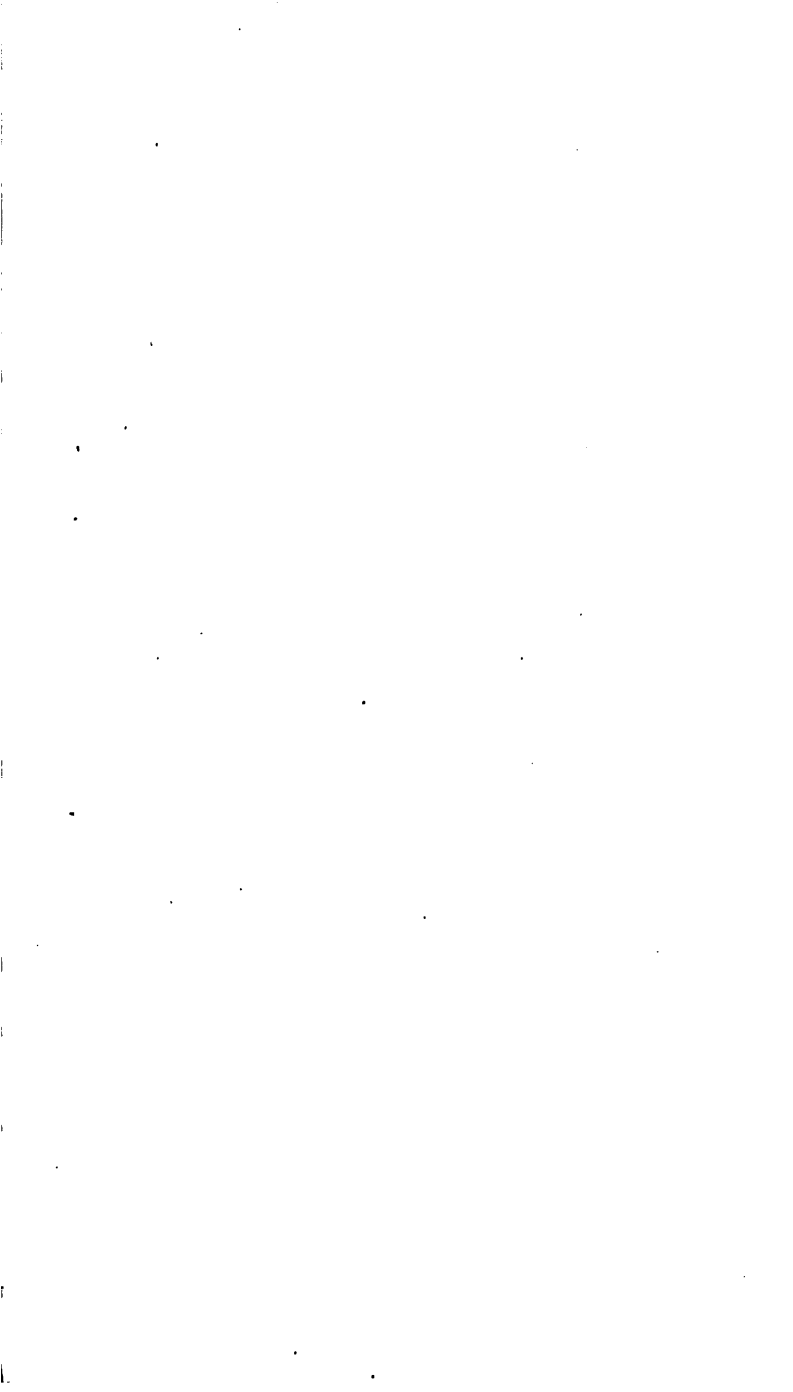
town, and it is entered by a narrow passage, easily shut by a chain, and which has a strong fort on each side. The basin will contain, it is said, 900 sail. The hills around appear barren and dreary. We anchored about eight A. M., and very soon received a troop of visitors, consisting chiefly of portwardens, or such as had some plea of right, to board and examine us.

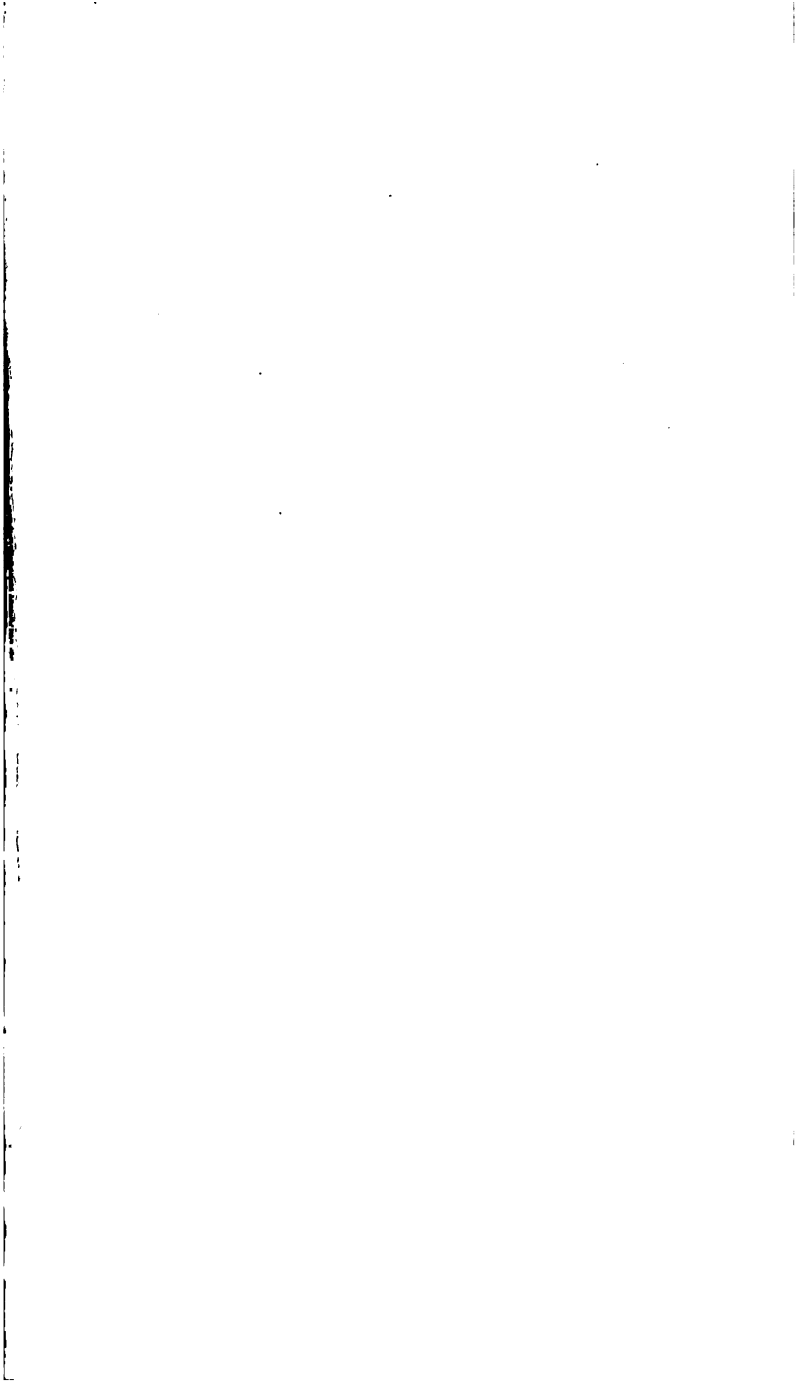
This passage on the whole, has been highly gratifying to us ; and if this steam-boat were under good management—if an American company had the control of her, she would yield, I think, in a short time, a handsome profit to the owners. The coast of the Mediterranean from Naples to Marseilles, is so picturesque and beautiful, the towns and villages on the margin of the sea so numerous, and the weather, in general, so mild, and the route by land so hazardous and unpleasant, I cannot but believe that a steam-boat conveyance will become an object of luxury, and of general desire to travellers, to and from Italy ; and of expedition and cheapness, to the inhabitants along the coast. But without a more intelligent and able direction than this boat has, I fear the period is still distant, when the Mediterranean steam-boats will be preferred to the backs of mules, the tedious and rugged movements of the diligence or voiture, or the miserable accommodations of the feluccas. It has been to me a singular, and unexpected gratification, to meet with such a conveyance as this, precisely in that part of my journey where I had anticipated the greatest difficulty. The coast, through the greater part of the distance from Genoa to Nice, is so rugged as to forbid the use of carriages. We had made our calculations accordingly, either to return to Tortona by the rough road, on which we had already crossed the Appenines, and thence proceed by Turin and Mount Cenis, to Lyons, or to engage mules and a muletteer, to carry us to Nice. Neither of these routes presented any thing in prospect, but fatigue and exposure. The occurrence of a steam-boat at Genoa was, therefore, as agreeable as unexpected.

9

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37







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